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Investor preference for director characteristics: Portfolio choice with gender bias

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Abstract

This study examines whether investor-level preferences for director characteristics influence portfolio choices, using data on the U.S. holdings of non-U.S. funds. Consistent with bias-based preferences influencing portfolio allocations, funds from countries with greater gender inequality invest less and hold smaller stakes in firms with more female directors. Since variation in funds' home-country gender biases are plausibly unrelated to the selection and performance of female directors in U.S. firms, the empirical strategy mitigates endogeneity concerns arising from estimates based on associations between market performance and gender demographics. The study contributes by linking investments to measured gender biases, and by providing evidence, through additional analysis, of potential channels through which gender bias may affect portfolio choice.

Keywords: Investor taste; Director characteristics; Gender bias; Portfolio Choice; Foreign funds

JEL Classification Codes: G11, J16, M10

I. INTRODUCTION

This paper investigates whether investor-level preferences over director characteristics can influence portfolio decisions. While economic reasons might drive preferences, this paper focuses specifically on whether behavioral biases can lead to preferences over easily-observable director traits. To isolate a behavioral influence, I examine whether investors who are expected to have greater gender biases against women display a preference in their portfolio holdings for more male-dominated boards and react more negatively to increases in board gender diversity.[1] Overall, I find evidence consistent with investment choices being influenced by gender biases.

Theoretically, gender biases can reduce investors' portfolio allocations to firms with more women in leadership positions (e.g., Adams and Ferreira, 2009). Existing studies tend to focus on the average associations between board gender demographics and investors' choices (e.g., Dobbin and Jung, 2011). Such average associations, however, are sensitive to confounds at the director, firm, or investor levels, including investors making portfolio decisions based on differences between male and female board members that are difficult for researchers to measure.

This study tests for bias-driven investor preference by exploiting data on non-U.S. funds' holdings of U.S. equity. The focus on non-U.S. funds provides two primary benefits. First, it allows for an explicit proxy for gender biases at the investor (i.e., fund) level.[2] Funds domiciled in countries with greater gender inequality are expected to have greater gender bias, and foreign

[1] The importance of examining investor biases is highlighted by the mixed evidence on the relation between firms' capital market performance and board gender diversity (Abdullah et al., 2016; Rhode and Packel, 2010). Beyond capital markets research, gender biases and stereotypes reflecting explicit or implicit biases against women affect economic outcomes in several domains including labor, education, politics, and health (Glick et al., 2000; Goldin and Rouse, 2000; Guiso et al., 2008; Inci et al., 2017; Nosek et al., 2009; Reuben et al., 2014; Sigelman et al., 1982; UNDP, 2011).

[2] The use of local characteristics as proxies for investor or managerial characteristics is ubiquitous in the vast literature on the effects of culture on economic activity (e.g., Guiso et al., 2009; Kumar, 2009). Construct validity of the proxy for gender biases used herein is explicitly examined in Section III.

funds' gender biases are plausibly exogenous to the selection and performance of female directors in U.S. public firms.[3] Second, the focus on the role of funds' local biases allows inference to be based on how portfolio choices involving the same set of firms vary across different types of investors. While differences in director skillsets can explain average investor reactions in the absence of gender biases, such differences would not explain why investor reactions to female board members would co-vary with cross-sectional proxies for investor bias. This empirical strategy therefore avoids several types of confounds related to directors' influence on performance or firm risk and the selection of corporate leaders based on factors unobservable to researchers. Panel data furthermore allows for identification based on time-series variation independent of firm, fund, and firm-fund pair effects.

The main empirical tests provide evidence of gender-biased portfolio tilting, whereby funds from more gender-biased countries tend to hold firms that have (proportionally) fewer female directors and react more negatively to increases in female board representation. These results are robust to controls for several factors that could influence funds' portfolio choices and firms' selection of directors, including features of the fund's home country as well as firm risk, stock liquidity, return momentum, director independence and age, industry and S&P index membership, firm and fund size, and country and year fixed effects. The inferences from tests involving heterogeneous reactions to changes in female board representation are robust to potential

[3] The empirical focus is on funds' preferences for women on the board of directors. Although biased investors can also be deterred by a female CEO, the low prevalence of female CEOs in the sample limits the power of statistical tests focusing on this proxy. Only about 1 to 3 percent of sample firms per year have a female CEO, while there is considerable variation in the fraction of female directors in every year. See Wolfers (2006) for a discussion of the statistical power problem related to empirical research on female CEOs. Unreported tests replacing the independent variable, fraction of female directors, with an indicator for female CEO yield coefficients of interest that are not statistically significantly different from zero.

sources of endogeneity related to time-invariant properties of firms and funds, including the potential for funds from gender-biased countries to prefer industries with lower female board representation for reasons other than gender bias (e.g., correlated preferences for extractive industries which have few female directors). Further note that reverse causality is highly unlikely, as this would require U.S. board's gender demographics to have a measurable impact on the cross-section of country-level gender inequality. Regarding omitted variables bias, identification relies on cross-sectional variation in the revealed preference for female directors, so a confounding correlated omitted variable would need to explain similar cross-country conditional variation in the association between female directors and funds' portfolio choices above and beyond the extensive set of controls.

The main result is robust and statistically significant, but the economic significance of the association between gender bias and portfolio choice is modest. For a firm that increased the fraction of women on the board by ten percent, funds from a country at the 75th percentile of the gender bias measure are expected to reduce their exposure to the firm (i.e., fraction of the fund's portfolio held in that firm) by 8 basis points more than funds from a country with a 25th-percentile gender bias score. This is roughly 20 (1.4) percent of the mean (standard deviation) change in exposure. The modest effect size is reassuring, as a large effect of gender biases on portfolio choice would be implausible in a mutual fund market where funds compete primarily on prior performance (Sirri and Tufano, 1998). While modest, the magnitude of the effect of gender bias on portfolio choice is on the order of the estimated effect of board independence on funds' portfolio choices.

Additional analyses examine potential channels and mechanisms. Funds expected to be more gender biased manifest a preference for (against) firms with 0 or 1 (2 or 3+) women on the

board. Allowing the effect to depend on the transition from *X* to *Y* board members, more gender-biased funds react negatively to the number of female board members increasing from 1 to 2 and from 3 to 4. The move from 1 to 2 may be significant as a departure from tokenism, while the importance of the move from 3 to 4 may reflect the potential formation of a bloc of female directors (Van Peteghem et al., 2018). Tests for effect heterogeneity show that funds from countries where men and women hold more different preferences (e.g., for reciprocity, risk-taking, or patience) manifest stronger effects of gender biases, while funds from countries that are geographically and linguistically closer to the U.S. show weaker gender bias effects. These results are consistent with the main effect being driven by statistical discrimination, which involves the extrapolation of group characteristics to group members when there is limited information about the efficacy or productivity of individuals.

The primary contribution of the paper is providing evidence on the potential for investor-level preferences for director characteristics, rooted in behavioral biases, to influence portfolio choices. Additionally, this study contributes to the extensive literature on the capital market effects of board gender diversity, discussed in greater detail in the next section.

II. BACKGROUND, RELATED STUDIES, AND METHODOLOGY

Theoretical background and potential channels

Gender biases reflect attitudes or beliefs, such as negative stereotypes, that may be explicit or implicit and manifest in preferences. Explicit attitudes operate consciously, while implicit attitudes operate subconsciously (Greenwald and Banaji, 1995; Wilson et al., 2000). Investors (e.g., fund managers) who are biased against women in leadership positions are expected to hold less of their portfolios in firms with more women on the board and reduce their holdings when the

fraction or number of women on the board increases. I refer to these phenomena as gender-biased portfolio tilting.[4]

Investor-level gender bias can be founded upon either taste-based or statistical discrimination, both of which may have cultural roots.[5] Taste-based discrimination, i.e., a dislike of women in certain positions, would directly cause a preference against female directors. Statistical discrimination can have the same effect but operates through lower expectations about the efficacy of female directors, which in turn lower expectations about future firm performance.[6] Statistical discrimination manifests more strongly when there is less information about the productivity or efficacy of individuals. Lee and James (2007) suggest, based on the literature on schemas (e.g., Perry et al., 1994), that observations of gender inequality likely reinforce stereotypes, including attitudes that women are less qualified for directorships than men.

The low prevalence of female corporate leaders and the complexity of the work directors do jointly inhibit investors' and researchers' ability to learn about female efficacy in the board room (Joshi et al., 2015b). Furthermore, empirical evidence on the effects of board gender diversity on firm performance is generally mixed (e.g., Adams and Ferreira, 2009; Rhode and Packel, 2010). The difficulty of estimation can cause fund managers to rely more on their prior beliefs, which could include gender biases based on locally-observed inequality.

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[4] The analysis focuses on fund-level gender biases. Additional analyses available from the author suggest that funds' investors' preferences are unlikely to be drivers of funds' biased portfolio strategies.

[5] Several studies provide survey-based evidence consistent with biases against women in leadership positions (Dubno, 1985; Powell and Butterfield, 1979; Powell et al., 2002). See Darity and Mason (1998) for an overview of common models of discrimination, focusing on drivers of wage differentials. See Alesina et al. (2013) for analysis of potential origins of cultural gender bias dating back to the dawn of civilization, as well as a discussion of reasons for their persistence.

[6] Bias in this study refers to attitudes, beliefs, and preferences, consistent with the literature on gender biases. In behavioral economics, bias often is used as a contrast to unbiased, rational beliefs or actions. Irrationality as in behavioral economics is not a precondition for gender bias, as statistical discrimination may reflect biases that are conditionally rational based on an individual's constrained set of observations.

Gender biases are plausibly prevalent in the asset management industry. Across 56 countries, only about 20% of funds have a female manager (Sargis and Lutton, 2016). In a survey conducted by the *Financial Times* in late 2017, about a third of women working in asset management indicated they had experienced workplace sexual harassment, and over two thirds of respondents reported experiencing sexist behavior in the office (Mooney and Smith, 2017).

The gender biases and stereotypes held by fund managers are expected to depend on local conditions. Simply put, fund managers in environments with greater gender inequality, or in cultures characterized by stronger gender biases and stereotypes, will hold beliefs that tend towards those of their surroundings, consistent with the formation of attitudes based on observed gender roles, authority or status differences, and stereotypes (Rudman and Kilianski, 2000).[7] Analyses supporting this assumption are presented in Section III. Fund managers from countries with greater gender inequality, as a manifestation of cultural gender biases, are expected to engage in more biased portfolio tilting.

Related studies

Extant research has found suggestive evidence consistent with investors' gender biases interacting with board gender diversity to influence investment choices. Dobbin and Jung (2011) analyze associations between female directors and firm value (measured via Tobin's Q), accounting performance, and ownership. In their ownership-related tests, the dependent variable is the fraction of the firm owned by a certain type of professional investor (blockholders, banks, insurance companies, investment advisors, and public pensions). The number of female directors

[7] This is consistent with prior studies that take country-level survey averages or aggregates (e.g., religious affiliation) as proxies for investor characteristics (e.g., Guiso et al., 2009; Kumar, 2009). While the fund manager's nationality is not observed broadly in the data, the maintained assumption is also consistent with funds hiring managers who are, on average, culturally similar to locals.

is positively associated with blockholder ownership and negatively associated with some kinds of non-blockholder ownership. They interpret this as reflecting blockholders' apprehension to be held accountable for gender-biased portfolio choices. However, their effect may also be driven by blockholders' potential influence on the selection of directors.

Post and Byron (2015), in a meta-analysis, find a positive association between board diversity and accounting performance, but a negative association between diversity and market performance in countries with high gender inequality. However, Post and Byron (2015) focus on domestic, within-country investment, which does not hold the firms and directors constant, meaning that effects attributed to *investors'* gender bias may be confounded by variation in the sample of firms and directors (i.e., differences in firms' home-country contextual environments). The identification strategy in this study, by exploiting gender inequality in foreign funds' home countries and focusing on only their U.S. holdings, provides a mechanism for linking gender bias explicitly to funds' portfolios, whereby funds that are plausibly more gender-biased tend to react more negatively to board diversity and the sample of firms is consistent across funds.

Ahern and Dittmar (2012) examine the value effects of a Norwegian law mandating that at least 40 percent of board members be female.[8] Firms with lower female board representation before the passage of the law saw a greater decline in value, although this is attributed to constraints on the pool of directors rather than director gender, as the new post-mandate female board members differed along several dimensions from the males they replaced. The authors "are careful to note that our setting does not allow us to separately identify the causal effect of age, experience,

[8] Studies using quotas often exploit changes in the number or fraction of female directors, which is a function of pre-quota endogenous choices, and thus has limited ability to fully address endogeneity concerns.

or gender on firm value." Furthermore, Eckbo et al. (2014) dispute the results and inference from Ahern and Dittmar (2012).

A concurrent paper by Niessen-Ruenzi and Ruenzi (2018) provides additional evidence for investor bias influencing portfolio choice. They find that mutual funds managed by women experience lower retail inflows than those managed by men, consistent with gender biases against female fund managers. In a confirmatory laboratory experiment, they find that participants who display bias in an implicit association test tend to invest less in funds with female managers than in funds with male managers. Their findings are consistent with the findings in this study, although they focus on retail investors and laboratory participants potentially more susceptible to biases. Overall, they provide corroboration in an alternative setting for this study's results on the potential effects of gender biases on even professional investors' portfolio choices.

Research methodology

The theory implies that more gender-biased investors will tend to allocate a lower fraction of their portfolio to firms with greater female board representation. I test this hypothesis using panel data on non-U.S. funds' holdings of U.S. public equity. First, I examine whether funds expected to be more gender-biased tend to hold portfolios with less female board representation on average. In these regressions, the dependent variable is a value-weighted average of the fraction of women on the boards of firms held by the fund and the independent variable of interest is the fund's home-country gender bias. Identification in these tests comes from cross-country variation. In the second type of specification, I test whether funds from more gender biased countries react more negatively to increases in female board representation. In these tests, the dependent variable is the fraction of the fund's U.S. portfolio allocated to a given firm and the independent variable of interest is the interaction between the fund's home-country gender bias and the change in the

fraction of women on the portfolio firm's board. An alternative specification replaces the fund's home-country gender bias measure with a lagged revealed-preference measure at the fund-time level. Additional analyses examine potential mechanisms using alternative variable definitions and cross-sectional analyses. In all specifications, the relevant decision maker is taken to be the fund manager, who chooses which firms to hold in the fund's portfolio.

A central concern is that board gender diversity might be associated with an aspect of real firm activity that is associated with a dimension of fund preferences that is distinct from but correlated with gender biases. Prior evidence suggests board gender diversity is associated with greater monitoring of executives (Adams and Ferreira, 2009), more informative stock prices (Gul et al., 2011), a lower probability and severity of securities fraud (Cumming et al., 2015), and more active boards (Schwartz-Ziv, 2017).[9] Inci et al. (2017) provide evidence consistent with female executives having less access to valuable inside information. Overall, the evidence linking board gender diversity to firm performance is mixed (Abdullah et al., 2016; Rhode and Packel, 2010; Van Peteghem et al., 2018). The use of multiple specifications with controls for confounding channels, along with corroborating cross-sectional evidence, mitigates concerns about these confounds.

[9] Schwartz-Ziv (2017), in a sample of 11 Israeli companies with significant government ownership, finds that boards with at least 3 directors and gender-balanced boards behave differently, on average, from other boards. The average fraction of female directors in her sample is 37%. For the firm-years appearing in the sample used here, only 4.75% have 3 directors and about 1.6% have more than 3 directors.

III. SAMPLE, DATA, AND DESCRIPTIVE STATISTICS

Sample and data

Fund holdings are taken from Thomson Financial's S12 dataset (formerly CDA/Spectrum), which provides information on funds' long positions in U.S.-listed common equity.[10] Schwarz and Potter (2015) describe disclosure requirements for mutual funds and the construction of the S12 database, which is built from SEC filings (e.g., N-30D, N-CSR, N-Q, and 13F) and voluntary portfolio disclosures to Thomson or Thomson's predecessor, CDA. Funds' portfolio choices are captured by $FRACHELD_{i,j,t} = HELD_{i,j,t}/TOTALHELD_{i,t}$, where $HELD_{i,j,t}$ is the reported dollar holdings of fund i in firm j at a reporting date t and $TOTALHELD_{i,t}$ is the sum of $HELD_{i,j,t}$ over all firms, j, that appear on a particular filing (indexed by i,t).[11] $NHELD_{i,t}$ is the number of firms reported by the fund on a given filing with the SEC, and $INVHELD_{i,t}$ is $1/NHELD_{i,t}$. $SUMHELD_{i,t}$ is the log of the total value of all reported holdings for fund i on the date-t filing.

Firm-specific director data is taken from RiskMetrics. RiskMetrics data is matched with fund reporting dates by taking firm information reported from the most recent annual meeting preceding the fund's reporting date. $(\#)FEMDIR_{j,t}$ is the (number) fraction of board seats at firm j held by women at time t.[12] $INDDIR_{j,t}$ is fraction of board seats held by independent directors.

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[10] The focus on non-U.S. funds is based on the need to infer gender biases from local conditions, where gender-bias data is available and varies considerably at the country level. The focus on U.S. public equity holdings is based on the availability of data on firms' boards' gender demographics and the limitation that the Thomson Financial S12 dataset is based on filings with the SEC that cover only U.S. holdings. An advantage of focusing only on U.S. firms is that it holds the contextual environment of the held firms constant in the cross-section. Specifically, the study avoids issues related to cross-country heterogeneity in firms' institutional environments (e.g., board members' responsibilities and liability) and labor markets for female board members.

[11] Changes in holdings arising from liquidating trades or initiations of positions are used in the analyses.

[12] Observations where the "female" indicator in RiskMetrics is missing are assumed to be male directors. Based on a random sample, the vast majority of directors with a missing "female" indicator have male first names. Dropping the observations with missing female indicators does not change the inferences.

$NDIR_{j,t}$ is the number of directors on the firm's board, and is the denominator in the calculations of $FEMDIR_{j,t}$ and $INDDIR_{j,t}$. Fund-level revealed preferences for various firm-level characteristics are captured from each fund-report. The postscript "_FP" is used for these, and they are calculated as value-weighted averages. For instance, $FEMDIR\_FP_{it} = \frac{\sum (HELD_{i,j,t} * FEMDIR_{j,t})}{\sum HELD_{i,j,t}}$, which equals $\sum_j (FRACHELD_{i,j,t} * FEMDIR_{j,t})$

The main proxy for fund-level gender bias, GI_k, is the UN Gender Inequality Index for the fund's home country, *k*, with the value taken from the 2011 UN Human Development report (HDR).[13] Funds are matched with countries based on the S12 "Country" variable. The location of the fund is used, as nationalities of individual fund managers are not generally available.[14] *GI* is based on several country-level indicators, and ranges from 0 to 1, with higher values indicating greater inequality.[15]

GI is constructed from indicators for gender bias reflecting female empowerment (educational attainment and participation in parliament), labor market conditions (labor force participation), and development (maternal mortality and adolescent fertility). Several prior studies construct gender inequality indicators based on the empowerment and labor market indicators

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[13] GI from a single year is used, rather than a time-series of GI for each country, as gender inequality is a slow-moving process (e.g., Alesina et al., 2013), suggesting that GI in one year is representative of GI across several years. In unreported analysis using a constructed time-series of GI values – constructed because the GI began to be reported only in 2010 – within-country GI has a first-order autocorrelation coefficient of 0.999. The constructed time series of GI is based on the algorithm described in the technical notes of the 2013 UN Human Development Report (see also Gaye et al. (2010)) with data available from the World Bank Global Development Indicators. Data availability is inconsistent across country-years, leading to several country-years for which the GI cannot be constructed.

[14] WRDS documentation and the author's examination of a sample of funds is consistent with the Country variable in S12 representing the location of the fund manager. See the "Construct validity of *GI*" subsection below for further analysis and discussion.

[15] Details on construction of the GI can be found in the technical appendix of the 2011 UN Human Development Report available at http://hdr.undp.org/en/content/human-development-report-2011, accessed December 27, 2013. The GI was introduced in 2010.

(e.g., Glick et al., 2000). Gaye et al. (2010), discussing *GI* in depth, argue that *GI* is superior to several of these alternative composite measures of gender inequality due to *GI*'s synthesis of empowerment and development indices. Gaye et al. (2010) specifically suggest that development indicators, like maternal mortality, reflect important economic and social facets of gender inequality, signaling women's status in society.

Control variables are included based on factors that could be related to country-level cultural beliefs (e.g., Spolaore and Wacziarg, 2016), female directorships (e.g., Hillman et al., 2007), and fund ownership determinants (e.g., Gompers and Metrick, 2001). Country-level proxies for other cultural and institutional attributes include Hofstede's six National Culture dimensions: *Power Distance, Individuality, Masculinity, Long-term Orientation, Indulgence,* and *Uncertainty Avoidance*. *Corruption* and *Religion in Politics* are the similarly-named indices from the International Country Risk Guide (ICRG). To capture local familiarity with female directors, *FracFemDirCY* is the country-year average fraction of female directors on boards of firms located in the fund's home country, taken from Schmid and Urban (2013). Legal system indicators are taken from JuriGlobe. Controls from the World Bank (WB) for each fund's local macroeconomic conditions are: *Log per capita GDP* (in U.S. dollars); *Net FDI as % of GDP* (net foreign direct investment, inflows minus outflows, divided by GDP); *Gini coefficient*; and *Log population.*

As the analyses focuses on holdings of U.S. firms, several proxies for familiarity and similarity with U.S. boards, board members, and culture are included. *Local directors from U.S.* is the fraction of foreign directors of corporate boards in the fund's home country who are from the United States, based on Barrios et al. (2017). *Directors in U.S.* is the number of U.S. corporate directors from the fund's home country reported in Barrios et al. (2017). These proxies capture familiarity with U.S. boards and board members. *Common language with U.S.* is the linguistic

commonality between the fund's home country and the U.S., based on the Melitz and Toubal (2014) Common Language measure. *Log distance from U.S.* is the log of the geographic distance from the fund's home country to the U.S. as provided by Melitz and Toubal (2014). *Genetic distance from U.S.* is the Spolaore and Wacziarg (2013) weighted FST genetic distance between the fund's home country and the U.S. *Religious distance from U.S.* is the Fearon weighted religious distance of the fund's home country from the U.S. provided by Spolaore and Wacziarg (2016). *Log trade with U.S.* is the log of total trade between the fund's home country and the U.S. from 1998 to 2007, from Melitz and Toubal (2014). *Log migrants in (from) U.S.* is the log of the stock of migrants from (in) the fund's home country in (from) the U.S. in 2010 taken from the U.N. Department of Economic and Social Affairs, Population Division.

Controls for firm characteristics include the following. *BOOK* is the log of the book value of common equity (Compustat item CEQQ reported during the calendar quarter prior to the fund report date). Market-based measures are taken from CRSP, unless otherwise indicated. *BETA* is the CAPM beta from a regression of the firm's returns on the CRSP value-weighted market portfolio using the 24 (at least 12) full months preceding the fund report date. *DIVY* is the annual dividend yield based on the most recent four quarters before the fund report date. *YMOM* is the cumulative annual security return (i.e., yearly momentum) for the 12 months preceding the fund report date. *QMOMx* is the cumulative return for the *x* quarters prior to the fund report (i.e., *QMOM1* captures quarterly momentum). *TURN* is share turnover (shares traded divided by shares outstanding) in the three months preceding the report. *ILLIQ* is Amihud (2002) illiquidity, calculated as the average log of daily absolute ex-dividend returns times 10^6 divided by dollar volume for the three months preceding the fund report. *RETVAR* is the variance of monthly returns for the 24 (at least 12) months preceding the fund report date. *MARKET* is the log market value of

the firm based on the report filed by the fund. Indicators for S&P index membership (S&P 500, S&P Midcap, S&P Smallcap) and 2-digit historical NAICS industry codes are taken from Compustat.

To eliminate funds in which fund managers are likely to be indexing or quasi-indexing, observations from filings that report more than 100 distinct stocks are eliminated from the sample. This admittedly ad-hoc selection criterion is meant to increase the statistical power of the regression tests by narrowing the sample to funds in which individual managers plausibly make portfolio decisions based on observable firm characteristics rather than through a formulaic investing strategy.[16] Managers of these funds are arguably more likely to look at portfolio firms' annual proxy statements and thereby observe the names of firms' directors, where director gender is plausibly indicated by first name. Robustness checks verify that results are not sensitive to the cutoff at 100 portfolio firms.

Construct validity of *GI*

Construct validity of *GI* relies on the assumption that fund managers inherit preferences and beliefs consistent with those of the fund's home country.[17] This type of assumption is common to a large literature on the influence of cultural beliefs and preferences on economic choices (e.g., Guiso et al., 2009). I estimate two statistics to support the assumption here. The first is the probability that an individual fund manager comes from the same country as the fund. The second is the cross-country correlation between gender biases held by the general populace and by professionals/managers in the same country. Jointly, these statistics help address the question of

[16] The Investment Objective Code in S12 is either missing or "Unclassified" for over 94.6 percent of the observations, so it is not used in the analysis.
[17] Less than three percent of the sample observations come from multi-country fund families.

whether professional fund managers' beliefs can be expected to be reflected by the average beliefs in each fund's home country.

The main sample is comprised of over 15,000 unique non-U.S. funds. To check whether fund managers come from their fund's home country, a sample of fund manager nationalities was hand-collected for a country-stratified random sample of approximately 100 funds appearing in the data in 2010 or 2011.[18] For the 75 funds with fund managers whose nationality could be inferred from online sources, 62 were from the same country, representing approximately 83 percent of the 75 non-missing observations. The 95% confidence interval for the probability of a match is (0.72,0.90). This suggests a high likelihood that fund managers' cultural backgrounds are reflected in the fund's home country data item.[19]

The second question central to construct validity of *GI* is whether professional fund managers from a given country share the average beliefs of their compatriots. The World Values Survey (WVS) provides data on beliefs from respondents from a wide array of countries and collects information on respondents' occupational categories. Gender biases are captured by responses to the following two statements: 1) Men make better political leaders than women do; and 2) On the whole, men make better business executives than women do. Answers to each were coded as: 0 = strongly disagree; 0.33 = disagree; 0.67 = agree; 1 = agree strongly. The WVS

[18] The fund manager found online is the fund manager as of data collection in September 2018. Although these are not necessarily the fund managers in 2010 or 2011, they nonetheless represent observations of individual fund managers whose cultural background can be checked and compared to the fund's domicile as listed in the dataset. Estimates of nationalities came either from articles about the fund manager, Linkedin pages, Facebook pages, or online profiles either at the fund's web page or from data providers such as Bloomberg or Morningstar. Google translate facilitated the reading of non-English pages. The hand-collected sample is available from the author.

[19] That the vast majority of fund managers are local is consistent with Kumar et al. (2015), who find that 5.3 percent of U.S. mutual fund managers have "foreign-sounding" names.

provides broad respondent occupational categories that allow for differentiation between professionals/managers and others (e.g., middle level non-managers, small business owners, manual laborers, farmers, and unemployed persons). I calculated the average country-level responses to the gender bias questions, both at the country-level for all respondents, denoted *GenderBias_WVS*, and separately for only 3 occupational categories representing professionals or managers (Employer/manager of establishment with 10 or more employed; Professional worker; and Supervisory Non-manual office worker), denoted *GenderBias_WVS_Professional*. In the cross-section of countries, the Pearson and Spearman correlations between *GenderBias_WVS* and *GenderBias_WVS_Professional* are both over 97%. This high correlation between the beliefs of professionals/managers and broader country-level averages suggests that professionals and managers have similar beliefs to their compatriots on average.[20]

Overall, the two correlations discussed above suggest that professional fund managers' beliefs are plausibly aligned with aggregate beliefs in their home countries. This is reflected in the high correlations both between fund-manager background and fund domicile, and between WVS-elicited beliefs between compatriot respondents with different degrees of professional employment. This supports the construct validity of *GI* as a measure of fund-level gender bias and the observation of Guiso et al. (2009), "that cultural effects are not limited to unsophisticated consumers, but are also present among sophisticated professionals such as mutual fund managers."

[20] *GI* is also significantly negatively associated with the home-country fraction of female directors, taken from Schmid and Urban (2013).

Descriptive statistics

Table 1.A shows, by country, the number of fund-firm-report observations and the means of the main variables.[21] The main sample is built from the intersection of the Thomson S12 fund holdings data and the RiskMetrics director data, as described above. The sample for the main analysis includes approximately two million fund-firm-time observations (in changes) from approximately 18,000 funds with NHELD ≤ 100 in the 1998-2011 period. Each observation, before aggregation, is a reported holding by a fund in a portfolio firm on a report filed by the fund at a point in time (i.e., fund-firm-time). Some analyses aggregate observations by fund-report or by fund home country. Table 1.B reports the means, medians, and Pearson correlations of country-level means and medians for the 42 countries in the sample.

Table 2.A and 2.B provide additional descriptive statistics and correlations. In Table 2.A, the unit of observation is the fund-report, or fund-time. There are approximately 156,000 fund reports in the sample. The mean value of $FEMDIR\_FP_{i,t}$ is 0.14, indicating that the value-weighted fraction of female directors for sample fund-time observations is 14 percent. $FEMDIR\_FP_{i,t}$ has a modest but statistically significant negative correlation with GI_k, providing univariate support for the hypothesis that gender bias is associated with portfolio choice.

Figure 1 presents further graphical evidence to support the main hypothesis. It plots the fraction of fund-time observations from below-median and above-median *GI* countries falling into each decile of sample-wide *FEMDIR_FP*.[22] Random assignment would imply roughly 10 percent for each decile bin for both above- and below-median *GI* countries. However, in the countries with

[21] The large number of observations associated with Spain may be attributable to European Union integration and tax incentives for companies in Spanish territories (Canary and Balearic Islands).
[22] The split is at *GI* = 0.15. Roughly 80 percent of the sample fund-time observations come from the 21 below-median *GI* countries.

below-median *GI*, the fraction of sample observations is increasing slightly in the *FEMDIR_FP* decile, from about 9.57 up to 10.85 percent. In contrast, for countries with above-median *GI*, the fraction of fund-years is decreasing in the *FEMDIR_FP* decile, from about 11.82 down to 6.45 percent. Overall, this suggests that funds from countries with greater gender bias are more likely to show revealed preferences against female directors at portfolio firms.

Table 2.B provides descriptive statistics and correlations for the differenced variables used in the fund-firm-time analysis in changes. The "*_dif*" suffix is appended to denote a changes variable. The mean change in *FRACHELD* is 0.004, and there is a modest increasing trend in the fraction of women on boards, indicated by the mean *FEMDIR_dif* of 0.005.

Nearly all of the correlations in Table 2 are statistically significant. The correlations do not correct for serial or cross-sectional dependence, as the regressions do, and should be interpreted accordingly. In Table 2.B, the change in the fraction of a fund held in a given firm (*FRACHELD_dif*) is positively correlated with changes in the fraction and number of female directors, the independence, mean age, and number of directors, and firm size. *FRACHELD_dif* is negatively correlated with changes in the CAPM beta, return variance, dividend yield and illiquidity. *FEMDIR_dif* is correlated with more independent and younger directors, growing firms, and shrinking boards. Consistent with Adams and Ferreira (2006) and Cumming et al. (2015), *FEMDIR_dif* is negatively associated with changes in risk measures including *BETA_dif* and *RETVAR_dif*. *FEMDIR_dif* is also positively (negatively) correlated with changes in the dividend yield and turnover (illiquidity). These correlations emphasize the value of controlling for potential confounds correlated both with fund preferences and the fraction of female directors.

IV. RESULTS

Fund portfolio-level analysis

The first set of analyses involve estimates of the regression:

$$FEMDIR\_FP_{i,t} = \alpha + \beta * GI_k + \sum_X \delta_X * CONTROL_X + \varepsilon_{i,t} \quad (1)$$

where subscripts *i, t,* and *k* refer to holding fund, date, and fund home country, respectively. $FEMDIR\_FP_{i,t}$, and GI_k are defined above. $CONTROL_X$ represents a set of controls. Specifications with five different sets of controls are presented in Table 3. Variables followed by "_FP" in the table indicate fund-time revealed preferences for company-level characteristics, calculated as $\frac{\sum_j X_{j,t} * HELD_{i,j,t}}{\sum_j HELD_{i,j,t}}$ where $X_{j,t}$ is the appropriate measure for the portfolio firm *j* at time *t*. Standard errors in each specification are clustered by country to allow for correlation between compatriot observations, which allows for correlated errors across funds and time. Column 1 includes only year indicators to account for the secular trend in female directors. The association between *GI* and *FEMDIR_FP* is negative and statistically significant ($\beta = -0.036, p < 0.05$), indicating that funds from more gender-biased countries tilt their portfolios away from firms with greater female board representation.

The specification in Column 2 adds controls for linguistic, genetic, and religious similarity with the U.S., geographic distance from the U.S., trade with the U.S., macroeconomic development, foreign direct investment, economic inequality, population, and migrant stock from and in the U.S.; portfolio-revealed fund preferences for independent directors, director age, firm size, valuation, and risk, payout policy, liquidity, momentum, and board size; the number of firms held; and indicators for the fund home country's legal origin and continent. Due to the slow-moving nature of cultural beliefs and preferences, a country-level proxy for gender bias is used, which precludes the inclusion of country fixed effects – hence the extensive set of country-level control variables. Inclusion of these controls reduces the number of observations to 69,161, but increases the R^2 from 0.16 in column 1 to 0.39 in column 2. With these controls included, the coefficient on *GI* increases in magnitude and significance, to -0.058 ($p < 0.01$).

Columns 3, 4, and 5 build on column 2 with additional controls related to culture, institutional characteristics, and country-level director characteristics related to gender and U.S. ties. Except for the institutional characteristics, none of these is significantly associated with *FEMDIR_FP* in the presence of the other controls. Furthermore, the coefficient on *GI* remains negative (ranging from -0.068 to -0.075) and significant at the one percent level.

Regarding economic magnitude, the coefficients in Table 3 can be interpreted as follows. The cross-country interquartile range of *GI* is $0.18 = 0.286 - 0.106$. An increase in *GI* from the 25th percentile of countries to the 75th percentile of countries is associated with a reduction in the value-weighted fraction of women on the board ranging from 65 to 134 basis points, e.g., $-0.0065 = -0.0362 * 0.18$ for the smallest coefficient and $-0.0134 = -0.0747 * 0.18$ for the largest. This is 4.7 to 9.6 percent of the mean value of *FEMDIR_FP* and 13 to 27 percent of the sample standard deviation of *FEMDIR_FP*. The average fund report lists approximately 26 U.S. firms held, and the average *NDIR_FP* is 11.5, implying an average of 300 possibly overlapping directors in the average foreign fund's U.S. portfolio, of which approximately a mean of 42 (14%) are women. Decreasing *FEMDIR_FP* by 65 to 135 basis points would imply 2 to 4 fewer female directors in the fund's portfolio. From a portfolio perspective, this could mean holding a couple firms with no female directors in lieu of firms with 1 to 2 female directors.[23] While modest at the fund portfolio level, aggregation across thousands of funds and firms could yield large economy-wide effects. Furthermore, note that the economic effects of gender biases for funds that seek to maximize returns or risk-adjusted returns should be exactly zero, or, at least should not vary with

[23] Of the 65 percent of sample firms with female directors, over 90 percent have only one or two.

country-level gender bias. That the estimates are significantly different from zero suggests a role for bias in the portfolio choices of professional fund managers.

The fact that several control variables are associated with *FEMDIR_FP* is suggestive of the potential for unobservable country-level features to create endogeneity biases due to correlation with fund's preferences for or against firms that have greater female board representation. To address this endogeneity concern, I move to analyses focusing on changes in the fund's portfolio composition, i.e., with fund-firm-time as the unit of analysis.

Analysis of changes in funds' portfolio composition

The first set of changes analyses focus on how *GI* affects the relation between changes in the fraction of women on corporate boards and changes in each fund's portfolio allocation decisions. These specifications include firm-level controls that mitigate issues related to changes in female board representation capturing differences in firm performance. The changes specification eliminates the potential for omitted variables at the fund, firm, or fund-firm pair level. For example, inferences from the changes specification would not be confounded by funds from less gender-biased countries preferring to hold firms from industries that tend to have more female directors, for whatever reason.

Variants of the following regression equation are estimated:

$$FRACHELD\_dif_{i,j,t} = \alpha + \beta * FEMDIR\_dif_{j,t} + \gamma * FEMDIR\_dif_{j,t} * GI_k + \sum_X \delta_X * CONTROL_X + \varepsilon_{i,j,t} \quad (2)$$

where subscripts *i*, *j*, *t*, and *k* refer to holding fund, held firm, date, and fund home country, $FRACHELD\_dif_{i,j,t}$ is the change in $FRACHELD_{i,j,t}$ for fund *i* in firm *j* from the fund's previous filing (*t-1*) to its current one (*t*). Observations where the last filing was more than 5 quarters ago are dropped. The main coefficient of interest in Equation (2) is γ, the coefficient on the interaction between $FEMDIR\_dif_{j,t}$ and GI_k. The null hypothesis ($\gamma = 0$), is that funds' average preferences

for female directors do not vary with local gender biases, while the alternative hypothesis ($\gamma < 0$), implies that funds from more biased countries react more negatively to increases in female board representation.

Changes in the number of female board members are infrequent in the data. At the fund-firm-report level, 85% of the observations with available data feature no change. The number of female board members increases by one in eight percent of the observations, and decreases by one in five percent of the observations. Changes in the fraction of female directors, *FEMDIR_dif* follow a similar distribution, as the 25th and 75th percentiles of the distribution of *FEMDIR_dif* are both zero. *FEMDIR_dif* takes non-integer values and has more non-zero values, as it is also affected by the more frequent board changes due to the addition or subtraction of male directors.

Regressions in changes are presented in Table 4. Standard errors in these regressions are clustered at the fund level to allow for non-zero correlation of the residuals for all observations within the same fund. This adjusts for the persistence in holdings of a given security over time and for the cross-sectional effect of a firm selling one security on the fraction held in the remaining securities for a particular set of fund-quarter observations. All coefficient estimates and standard errors in Table 4 have been multiplied by 10,000 for presentation, although coefficients reported in parentheses in the text have not been similarly transformed.

In columns 1 and 2 of Table 4, the model includes controls for changes in board age, board independence, firm size, risk, market exposure, momentum, and liquidity, as well as fixed effects for industry, year, and S&P index, which capture heterogeneous trends in the changes specifications. The coefficients in Models 1 and 2 of Table 4 on *FEMDIR_dif*GI* are negative and significant (−0.0503 and −0.0486, $p < 0.01$), supporting the hypothesis that investor-level gender biases influence portfolio choices. Columns 1 and 2 differ only in that column 1 includes the main

effect of *GI*, while column 2 includes country fixed effects. The country fixed effects allow for country-specific trends in *FRACHELD*. Interestingly, the main effects on *FEMDIR_dif* are about 0.005 and statistically significant ($p < 0.05$), suggesting that foreign funds from low-*GI* countries tend to tilt their portfolios in favor of firms when the fraction of women on the board increases, but funds from more gender-biased countries tend to tilt less favorably and even tilt against. For example, the estimated total coefficient on *FEMDIR_dif* for a fund from Chile (*GI* = 0.374), based on column 2, is −0.01. Focusing on the total effects of a change in *FEMDIR*, funds from countries with gender inequality scores above (below) approximately 0.0051/0.049 = 0.10 tend to decrease (increase) their portfolio allocation in firms following an increase in the fraction of women on the board.

Column 3 includes additional interactive controls to address potential alternative hypotheses and confounds. First, *GI* is a country-level proxy for gender biases, which could be associated with other factors including preferences for directors' experience or independence. Funds in less-developed countries might wish to hold U.S. firms to gain exposure to the U.S. market and diversify home risks, in which case they would tilt their portfolios towards higher U.S. beta firms. Additionally, these funds could be further from the U.S. market, and as such desire board members who are more engaged in monitoring to reduce risks associated with being less able to closely monitor management. Based on the results of Adams and Ferreira (2009) and Cumming et al. (2015), funds from less-developed countries that happen to have higher gender inequality might prefer to invest in firms with women on the board to take advantage of female directors' higher expected monitoring of management or lower propensity for risky activities. The increase in monitoring would plausibly be reflected in lower firm risk (Brick and Chidambaran, 2008) or be further associated with the fraction of independent directors. Alternatively, firms with

more female directors might have a different risk profile due to heterogeneous risk preferences between male and female directors (Carter et al., 2016). To address these potential confounds, the following variables are interacted with *GI* as additional controls: *BETA_dif*, *RETVAR_dif*, *INDDIR_dif*, and *MEANAGE_dif*.

None of the coefficients on these interactions are statistically significant. The magnitude of the coefficient on *FEMDIR_dif*GI* is substantively unchanged with the inclusion of these additional controls, and remains statistically significant (-0.046, $p < 0.01$). Overall, results in Table 4 consistently support the hypothesis that investors' gender biases manifest in portfolio choices.

Regarding economic significance, consider the estimated effect on changes in portfolio allocations of a female director replacing a male director on a 10-person board, for funds from the boundaries of the interquartile range of *GI*. Specifically, consider the difference in the effect of a 0.10 value for *FEMDIR_dif* for a fund with *GI* equal to 0.106 (the 25th percentile of sample countries) compared to a fund with *GI* equal to 0.286 (the 75th percentile of sample countries). The difference in effects based on the coefficients estimated in column 3 is $-0.046 * 0.1 * (0.286 - 0.106) = -0.0008$, which is an eight basis point difference in the change in the fraction of the fund's reported holdings invested in a given firm. This is about 20 (1.4) percent of the mean (standard deviation) of *FRACHELD_dif*.

Table 5 replicates the analysis in Table 4, but with the country-level *GI* replaced by $FEMDIR\_FP_{i,t-1}$, which captures the fund's revealed preference for female directors on its previous filing. Unlike GI_k, $FEMDIR\_FP_{i,t-1}$ varies within country and across time, although, as shown in Table 3, variation in $FEMDIR\_FP_{i,t-1}$ may reflect factors other than gender biases. In the three models presented in Table 5, the coefficient on $FEMDIR\_dif_{j,t} * FEMDIR\_FP_{i,t-1}$ is positive and significant at the one percent level (coefficients ranging from 0.269 to 0.282). This provides

consistent, supportive evidence in that funds that have a revealed historical preference for female directors tend to react more positively to increases in the fraction of female directors.

Additional analyses

This section presents additional analyses focused on channels or mechanisms through which gender biases might affect investment choices. Table 6 examines whether funds expected to be more gender biased seem to tilt their portfolios toward firms with fewer women on the board. Each column in Table 6 provides estimates from a modified version of Model 2 from Table 3, with the dependent variable replaced by *Number of Female Directors Fund Preference (NFEMx_FP)*. *NFEMx_FP* is a fund's revealed preference for firms with 0, 1, 2, or 3+ female directors for holdings reported at time *t*, defined as $NFEMx\_FP_{i,t} = \frac{\sum_{j,t} 1_{NFEM_{j,t}=x} * HELD_{i,j,t}}{\sum_{j,t} HELD_{i,j,t}}$ where *i* denotes fund, *j* denotes portfolio firm, *t* denotes time, $NFEMx_{j,t}$ is the number of female directors on firm *j* at time *t*, and $HELD_{i,j,t}$ is the fund's dollar-denominated holdings in firm *j* on time *t*. Table 6 provides estimates with both GI_k and $FEMDIR\_FP_{j,t-1}$ as independent variables of interest. The results in Table 6 suggest that funds expected to be more gender biased tend to manifest a preference for (against) firms with 0 or 1 (2 or 3+) women on the board.[24]

Table 7 examines which types of changes in female board representation drive the earlier results from Table 4. Table 7 provides regression estimates of the γ coefficients from estimates of

$$FRACHELD\_dif_{i,j,t} = \sum_{X,Y} \gamma_{X,Y} * 1_{\#FEMDIR_{j,t-1}X} * 1_{\#FEMDIR\_dif_{j,t}Y} * GI_k + \sum_{Z} \delta_Z * CONTROL_Z + \varepsilon_{i,j,t} \qquad (3)$$

[24] Note that *FEMDIR_FP* is mechanically related to *NFEMx_FP* – negatively for low *x* values and positively for high *x* values. Combined with persistence in funds' holdings, this may influence coefficient estimates in columns five through eight of Table 6, although fund-clustered standard errors should correct for such within-fund correlation across time.

which is equation (2), with $FEMDIR\_dif_{j,t}$ replaced with the product of indicators for *lag(#FEMDIR)X* and *#FEMDIR_difY*, where $X \in (=0, =1, =2, =3, >3)$ and $Y \in (<-1, =-1, =0, =1, >1)$. Each coefficient $\gamma_{X,Y}$ addresses the question of how the response for firms moving from having *X* directors to having *X+Y* directors varies for funds with different GI_k values.[25] The results presented in Table 7 suggest that the effects of gender bias manifest primarily when firms either go from having one to two directors, or from having three to four. The importance of the transition from one to two directors is consistent with the potential for a single token female director to be discounted by gender-biased investors, while the transition from three to four is consistent with gender-biased investors becoming concerned when female directors may form a bloc of more than three directors (Van Peteghem et al., 2018).

Table 8 examines effect heterogeneity across four classes of potential mechanisms. First, gender biases may affect investment decisions because fund managers expect female directors to have different preferences and thus make different decisions. Second, a low fraction of women in professional roles in a fund's home country might reduce fund managers' expectations of the efficacy of female directors. This perceived efficacy can be low because women are underrepresented in fund management (Sargis and Lutton, 2016), corporate directorships, or professional roles more generally. Third, fund managers may hold sexist attitudes about men or women in general. Sexist attitudes may be hostile (e.g., women seek special favors) or benevolent (e.g., women should be rescued first in a disaster), and different types of attitudes might differentially affect fund managers' choices, with benevolence potentially leading to over-

[25] Regressions of *FRACHELD_dif* on changes in the number of male directors, interacted with *GI*, are available from the author. These regressions suggest that *GI* is associated with more positive reactions to increases in the number of male directors, potentially driven by negative reactions to firms that reduce the number of male directors by more than one.

investment in firms with more female directors. Finally, geographic or linguistic distance might affect the degree to which fund managers can interact, bond, or relate to directors. More in-person interaction or a common language can facilitate fund managers' learning about directors as individuals, reducing the likelihood of statistical discrimination facilitated by a lack of information on individual productivity or efficacy.

Table 8 (in panels 8.A through 8.D) presents regression estimates of equation (2) supplemented with interactions between additional proxies and the variables of interest. The coefficients of interest are on the triple interaction, Δ*Female directors * Gender Bias * Additional Proxy*, where *Gender Bias* is either $-GI_k$ or $FEMDIR\_FP_{i,t-1}$, and *Additional Proxy* is an interaction variable discussed further below. All *Additional Proxy* variables are measured at the country or country-year level, and therefore capture fund managers' beliefs of observations with noise. *GI* is included negatively to aid the interpretation of coefficients, i.e., so same-sign coefficients across Models can be interpreted similarly. In interpreting the coefficients on the triple interactions of interest, positive coefficients indicate stronger effects of gender bias on investment choices when the *Additional Proxy* is larger, while negative coefficients indicate weaker effects.

8.A tests the first channel related to fund managers extrapolating local differences in preferences between men and women, using measures from Falk and Hermle (2018). The measures include proxies for average country-level differences in altruism, trust, positive reciprocity, negative reciprocity, risk-taking, and patience, as well as a summary measure based on the first principal component of these (*PrefDif*). The survey-based individual preference measures capture the degree to which women in the country tend to display the preference more strongly, controlling for other individual-level features. The principal component is associated with women displaying greater levels of altruism, trust, and positive reciprocity, and lower levels of negative reciprocity,

risk taking, and patience, relative to men.[26] Models 1 and 2 use the principal component, *PrefDif*, while models 3 and 4 use interactions with each individual preference difference measure. In Models 1 and 2, the coefficient on the triple interaction, Δ*Female directors* * *Gender Bias* * *PrefDif*, is negative and significant at the five and one percent levels, respectively. This suggests that differences in preferences between men and women in the fund's home country can influence the effects of gender biases on investment. Specifically, the effects of gender bias on investment are greater when *PrefDif* is more negative, indicating women, relative to men, having more positive scores for negative reciprocity, risk taking, and patience, and more negative scores on altruism, trust, and positive reciprocity, on average. In Models 3 and 4, 10 out of the 12 interaction coefficients presented are not significant, and only interactions involving reciprocity in Model 4 are positive and significant at the ten percent level. Overall, these results suggest that gender biases may influence investment choices because, based on local differences in preferences between men and women, fund managers might expect female directors to have different preferences from male directors, and this difference in preferences makes firms with more female directors less attractive.

8.B examines the second channel, focusing on whether fund managers' gender bias is related to the prevalence of women in various professions in the fund's home country. I use the percent of home-country fund managers (Models 1 and 2), doctors (Models 3 and 4), and public-firm directors (Models 5 and 6) who are female. In Model 2, the coefficient on the triple interaction is positive and significant, although the coefficient in Model 1 is near zero, providing mixed

[26] Thanks to Johannes Hermle for sharing country-level proxies for differences in preferences. The measures used for the individual preference proxies are coefficients on a female indicator from country-specific regressions of each individual-level survey-based proxy on the female indicator and controls for age, age squared, subjective math skills, education level, and household income quintile. See Falk and Hermle (2018) for further detail on the survey and the construction of country-level proxies.

support for the role of local female fund managers in driving the relation between gender biases and investment choices. It may be that men and women display similar implicit biases against female authorities (Rudman and Kilianski, 2000). Furthermore, gender biases against female portfolio managers in countries with greater gender inequality are a plausible mechanism consistent with the main hypotheses.

In Models 3 and 4 of 8.B, the coefficients of interest are mixed. The coefficient on the triple interaction is negative (positive) and significant in Model 3 (4), implying that the prevalence of female medical professionals mitigates the effect of country-level biases on investment but is associated with a stronger degree of firm-level revealed preference biases influencing future investment choices. Model 6 suggests, based on the negative and significant coefficient on the triple interaction ($p < 0.10$), that familiarity with female directors, via the prevalence of local female directors, mitigates the degree to which gender biases influence investment choices. Interestingly, the regression estimates in 8.B suggest that female prevalence in investment management and medicine may tend to enhance the influence of gender biases on investment choices, while the presence of local female directors tends to reduce the influence of gender biases on investment. The result on female fund managers is particularly surprising as it contradicts the idea that female investors might be less gender-biased.

8.C focuses on the third mechanism involving country-level sexist attitudes. The regressions incorporate interactions with the country-average scores from the Hostile Sexism and Benevolent Sexism scales reported in Glick et al. (2000). Male scores are used because most fund managers are men (Sargis and Lutton, 2016), and the scores are included separately because Glick et al. (2000) report strong positive correlations between them. The interactions of interest are

positive and significant in Models 2 and 4, but insignificant in Models 1 and 2, providing modest, mixed evidence that sexist attitudes, whether hostile or benevolent, drive the main results.

8.D presents results related to the fourth channel involving potential interaction and communication between fund managers and directors. Models 1 and 2, include interactions with *Log Distance from U.S.*. The coefficient of interest in Model 2 is positive and significant ($p < 0.05$). The coefficient of interest in Model 1 is also positive, though not significant. In Models 3 and 4, the *Additional Proxy* is commonality in the fund's home-country language with the U.S. In Models 3 and 4, the coefficients on the interaction of interest are negative and significant at the five and one percent levels, respectively. Overall, 8.D suggests that gender biases manifest more strongly when the fund's home country is geographically or linguistically farther from the U.S.

Overall, the results from Table 8 suggest that gender biases may influence investment the most when women locally display broad differences in average preferences relative to men and investors (i.e., fund managers) are geographically and linguistically far from the U.S. These are consistent with fund managers extrapolating locally-formed views about women to female directors at U.S. companies with whom they have limited opportunities to interact or converse with frequently. There is also modest evidence that this potential extrapolation is weaker when more local board seats are held by women. This broadly consistent with statistical discrimination involving the extrapolation of group characteristics to group members when there is limited information about the efficacy or productivity of individuals.

Note that the results presented so far are consistent both with funds from countries with high gender inequality biasing against firms with greater board gender diversity, and with funds from countries with low gender inequality biasing in favor. To examine whether either explanation dominates, the regressions in column 3 of Table 4 was re-estimated with *FEMDIR_dif*GI* replaced

by *FEMDIR_dif*GI*1*$_{GI>0.1175}$ and *FEMDIR_dif*GI*1*$_{GI<0.1175}$, where 1_X is an indicator for condition *X* holding.[27] In the re-estimation, only the coefficient for the low-inequality subsample, *FEMDIR_dif*GI*1*$_{GI<0.1175}$, is not significantly different from zero (p = 0.75), while the coefficient for the high-inequality subsample, *FEMDIR_dif*GI*1*$_{GI>0.1175}$, is negative and nearly significant at the ten percent level ($\beta = -0.0371$, $SE = 0.0231$, and p = 0.11). Overall, this result provides modest support for the effect of gender bias on portfolio choice being concentrated in countries with relatively high gender inequality, consistent with negative rather than positive gender bias.

Additional robustness checks (available from the author) confirm that the results regarding portfolio tilting presented in Tables 4 and 5 are not attributable to several alternative explanations. Broadly, results are robust to using alternative gender bias proxies; using the average of GI_k across all funds in a given fund family; including interactions between *FEMDIR_dif* and proxies for corruption, religiosity, economic development, the fraction of female directors in the fund's home country; including interactions between GI_k and proxies for firm size, leverage, corporate social responsibility (CSR) performance, or an indicator for CSR-related shareholder votes; using samples based on funds with different *NHELD* cutoffs; excluding any single country; clustering standard errors by country, firm, or country and firm, or fund and firm. Consistent with indexers or quasi-indexers being independent of gender biases, the main result does not hold for funds that hold 499 to 501 firms (i.e., funds that are likely to be mimicking the S&P 500).[28]

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[27] Because the *GI* is measured at the country-level, the sample split results in not-quite equal subsamples (1,578,142 observations with *GI* > 0.1175, and 1,279,864 observations with *GI* < 0.1175 for the Table 4 sample). Additionally, the relevant value for median-splitting the sample used to estimate the regressions presented in Table 5 is also 0.1175.

[28] In additional analyses using changes in the number of shares rather than changes in portfolio allocation as the dependent variable (not reported), the coefficients of interest are not significant.

V. CONCLUSION

Using data on the U.S. holdings of non-U.S. funds, this paper provides evidence that gender bias is associated with portfolio choice in a manner consistent with a modest effect of investors' gender biases on the stocks they hold. Regression results show that funds display gender-biased portfolio tilting: funds from countries with greater gender inequality tend to tilt their portfolios away from firms with a greater fraction of female directors on the board. The identification strategy relies on how the association between fund portfolio choices and firms' board gender demographics varies with investors' gender preferences inferred from their home country's level of gender inequality. This strategy is not likely to be confounded by unobservable properties of firms, directors, or funds, which are likely to confound inferences that rely only on the average association between investor holdings and female directors. Additional results suggest statistical discrimination based on home-country differences between men and women as a plausible channel, enhanced by a lack of interpersonal interaction between fund managers and directors due to geographic and linguistic realities.

The results are important in part because they imply that investor-level gender biases can contribute to a negative environment for female directors and executives, supporting the glass ceiling within firms, even though investors are external. Although several studies have suggested interventions to address bias within organizations (Joshi et al., 2015a; McDonald and Westphal, 2013), addressing investor-level biases poses a significant problem beyond the firm's control. Furthermore, investors from developing countries with greater gender inequality are becoming increasingly important in developed capital markets (Karolyi et al., 2015), suggesting a potentially increasing influence on firm valuations going forward. However, large asset managers in the U.S. and Western Europe have begun to incorporate positive biases into their portfolio strategies (Lublin and Krouse, 2017), which can serve as a useful counterweight to negative implicit biases.

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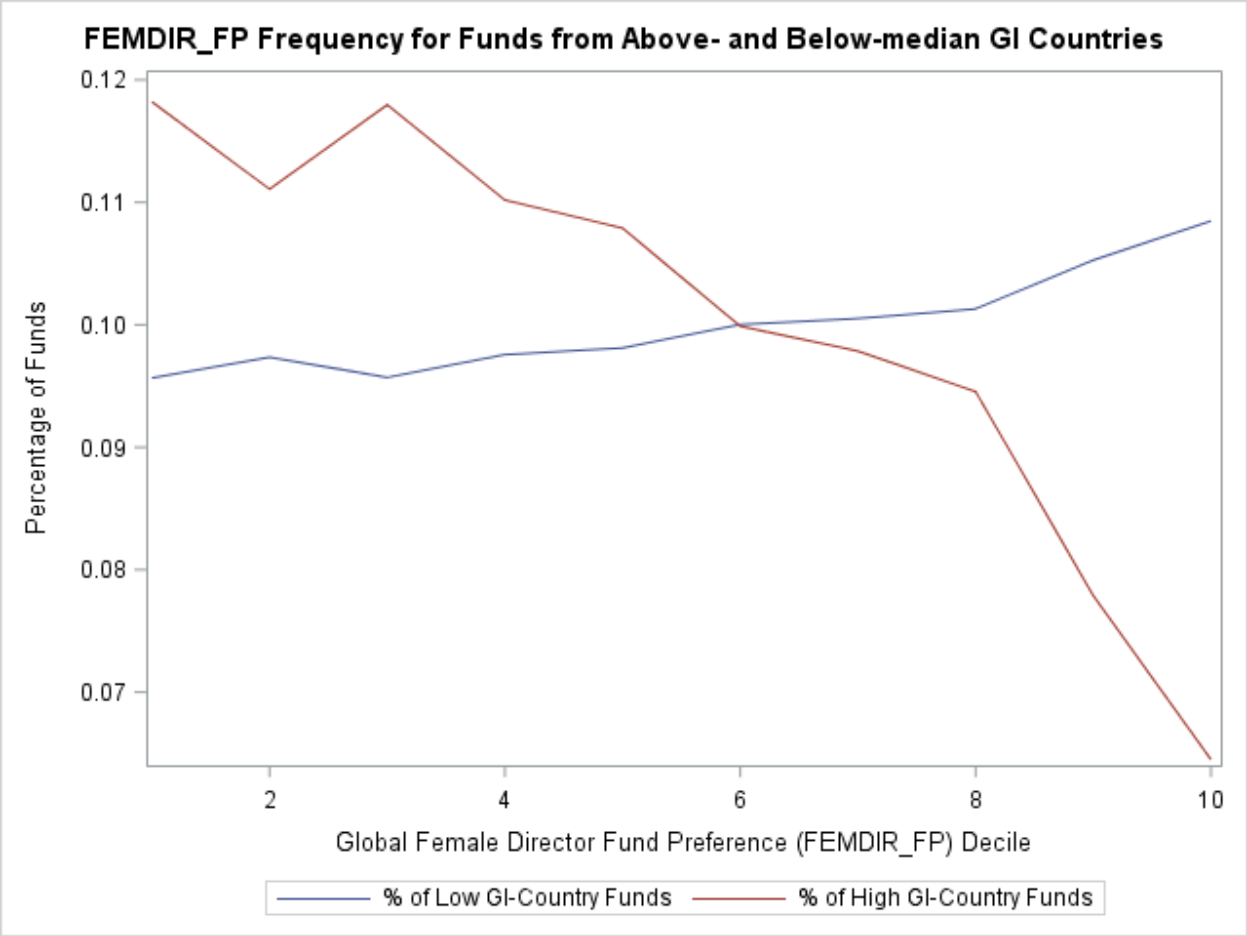
FIGURE 1



This figure presents the fraction of fund-time observations in above-median (below-median) *GI* countries appearing in each decile of the sample-wide *FEMDIR_FP* distribution. *GI* is the UN Gender Inequality index. *FEMDIR_FP* is a revealed preference measure of the fund's preference for female directors, defined as the value-weighted average fraction of female directors in the fund's portfolio firms. *Female Director Fund Preference (FEMDIR_FP)*, is a fund's revealed preference for female directors for holdings reported at time *t*, defined as $FEMDIR\_FP_{i,t} = \frac{\sum_{j,t} FEMDIR_{j,t} * HELD_{i,j,t}}{\sum_{j,t} HELD_{i,j,t}}$ where *i* denotes fund, *j* denotes portfolio firm, *t* denotes time, $FEMDIR_{j,t}$ is the fraction of female directors on firm *j* at time *t*, and $HELD_{i,j,t}$ is the fund's dollar-denominated holdings in firm *j* on time *t*.

TABLE 1.A: SAMPLE COUNTRIES AND COUNTRY-MEANS

Country	N	*FRAC HELD*	*FEM DIR*	*GI*	*IND DIR*	*NDIR*	*BETA*	*MAR-KET*	*YMOM*	*NHELD*	*SUM HELD*	*Min YEAR*	*Max YEAR*
NETHERLANDS	60,263	0.03	0.14	0.05	0.73	10.92	1.16	23.78	0.17	48.05	17.71	1998	2011
SWEDEN	132,363	0.03	0.14	0.05	0.73	11.24	1.1	23.99	0.11	55.67	16.95	1998	2011
DENMARK	50,169	0.03	0.14	0.06	0.74	11.02	1.13	23.89	0.11	49.31	16.6	1998	2011
SWITZERLAND	199,837	0.03	0.15	0.07	0.75	11.27	1.04	23.91	0.11	53.23	16.77	1998	2011
FINLAND	20,527	0.04	0.14	0.08	0.74	11.08	1.11	23.86	0.09	36.69	16.32	1998	2011
NORWAY	39,274	0.03	0.14	0.08	0.74	11.22	1.08	23.87	0.13	52.3	16.68	1998	2011
GERMANY	460,389	0.03	0.14	0.09	0.72	11.34	1.09	24.05	0.14	47.16	16.63	1998	2011
SINGAPORE	18,512	0.03	0.13	0.09	0.71	11.02	1.15	23.77	0.15	42.83	15.88	1998	2011
ICELAND	1,143	0.03	0.12	0.1	0.68	10.86	1.27	23.95	0.19	35.52	16.31	2000	2008
BELGIUM	79,123	0.03	0.14	0.11	0.73	11	1.09	23.72	0.12	52.09	16.72	1998	2011
FRANCE	113,075	0.03	0.14	0.11	0.75	11.07	1.07	23.84	0.13	49.88	16.7	1998	2011
ITALY	121,443	0.03	0.14	0.12	0.73	11.6	1.04	24.21	0.14	44.64	17.11	1998	2011
JAPAN	47,758	0.02	0.14	0.12	0.73	11.31	1.05	23.95	0.14	56.92	16.53	1998	2011
SPAIN	501,000	0.07	0.15	0.12	0.73	11.82	1.1	24.72	0.13	25.9	14.2	1998	2011
AUSTRIA	71,987	0.02	0.14	0.13	0.73	11.4	1.08	23.97	0.12	52.25	15.98	1998	2011
AUSTRALIA	61,719	0.03	0.13	0.14	0.72	10.96	0.99	23.74	0.07	51.14	14.82	1998	2011
CANADA	372,661	0.02	0.13	0.14	0.73	10.99	1.07	23.61	0.15	51.69	17.28	1998	2011
CYPRUS	228	0.02	0.16	0.14	0.77	11.45	0.98	24.26	0.06	52.51	13.4	2006	2009
CZECH REPUBLIC	3,427	0.03	0.15	0.14	0.77	11.06	1.06	24.13	0.14	45.66	15.94	2001	2011
PORTUGAL	29,386	0.02	0.14	0.14	0.74	11.2	1.09	23.88	0.17	56.35	15.99	1998	2011
ISRAEL	15	0.03	0.01	0.15	0.62	6.53	3.34	20.55	-0.4	31.07	14.3	2001	2002
GREECE	14,258	0.04	0.15	0.16	0.74	11.41	1.12	24.36	0.12	40.7	15.43	1998	2011
POLAND	751	0.04	0.15	0.16	0.76	11.56	0.91	24.11	0.05	55.1	15.67	2001	2011
LUXEMBOURG	146,897	0.03	0.13	0.17	0.71	11.25	1.1	23.87	0.14	50.07	16.02	1998	2011
ESTONIA	3	0.22	0.35	0.19	0.87	7.67	1.31	20.36	0.29	3.33	13.97	2005	2006
IRELAND	34,009	0.03	0.14	0.2	0.73	11.22	1.06	23.81	0.14	48.49	17.06	1998	2011
NEW ZEALAND	5	0.04	0.05	0.2	0.47	10	0.48	21.31	-0.14	30	15.87	1999	1999
UNITED KINGDOM	419,700	0.02	0.13	0.21	0.72	11.1	1.07	23.75	0.15	50.45	17.42	1998	2011
HUNGARY	524	0.02	0.15	0.24	0.75	11.07	1.18	23.81	0.11	43.45	15.09	2001	2010
MALTA	6	0.26	0.17	0.27	0.88	10.17	1.83	23.87	0.23	5	15.3	2011	2011
BAHRAIN	50	0.03	0.17	0.29	0.82	11.52	0.91	24.16	-0.36	32.5	15.16	2009	2009
MALAYSIA	418	0.1	0.17	0.29	0.83	11.76	1.11	24.35	0.19	21.76	14.97	2008	2011
TRINIDAD & TOBAGO	358	0.02	0.18	0.33	0.83	11.81	1.03	24.44	0.22	42.15	16.82	2009	2011
ARGENTINA	2,759	0.07	0.17	0.37	0.79	11.63	1.03	24.67	0.07	21.98	13.3	2000	2011
CHILE	22,516	0.03	0.14	0.37	0.74	11.02	1.15	23.97	0.08	38.65	14.39	2000	2011
PERU	62	0.16	0.13	0.42	0.64	12.65	1.24	25.14	-0.11	7.4	13.17	2000	2003
PHILIPPINES	50	0.07	0.09	0.43	0.68	10.8	1.08	24.74	0.42	19.14	15.64	1999	2000
BRAZIL	144	0.09	0.16	0.45	0.76	11.6	1.04	24.46	0.17	53.96	15.46	2001	2011
MEXICO	6,697	0.07	0.17	0.45	0.8	12.2	1.05	25.11	0.1	26.45	16.46	2000	2011
SOUTH AFRICA	13,166	0.05	0.12	0.49	0.69	10.99	1.23	23.85	0.16	37.78	16.24	1998	2011
SWAZILAND	21	0.03	0.13	0.55	0.81	10.9	1.28	24.19	0.28	34.24	18.19	2007	2009
INDIA	748	0.09	0.18	0.62	0.8	11.15	0.96	24.1	0.15	25.08	16.34	2000	2011

This table presents the country-level number of fund-firm-time observations and means for select variables used in the study ordered by *GI*. *FRACHELD* is the value of fund *i*'s holdings in firm *j* reported in the filing from date-*t*, divided by the sum of all holdings reported by fund *i* at date *t*, based on data from Thomson S12. *FEMDIR* is the fraction of female members of the board of directors. *GI* is the UN Gender Inequality Index from 2011. *INDDIR* is the fraction of independent members of the board of directors. *NDIR* is the number of directors on the firm's board. *FEMDIR*, *INDDIR*, and *NDIR* are based on the most recent annual meeting preceding the fund's reporting date. *BETA* is the CAPM beta from a regression of the firm's returns on the CRSP value-weighted market portfolio using the 24 (at least 12) full months preceding the fund report date. *MARKET* is the log firm market value based on the fund's filing. *YMOM* is momentum based on cumulative monthly security returns for the 12 months preceding the fund report date. *NHELD* is the number of firms reported on the fund's filing. *SUMHELD* is the log of the total value of all reported holdings for fund *i* on the date-*t* filing. Min YEAR and Max YEAR are the first and last year in which a fund from the country appears in the sample.

TABLE 1.B: COUNTRY-LEVEL MEANS AND MEDIANS, AND CORRELATIONS OF COUNTRY-LEVEL MEANS

Variable	*FRACHELD*	*FEMDIR*	*GI*	*INDDIR*	*MEANAGE*	*NDIR*	*BOOK*	*BETA*	*DIVY*	*MARKET*	*ILLIQ*	*QMOM1*	*YMOM*	*RETVAR*	*TURN*	*NHELD*	*SUMHELD*
Number	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Mean of means	0.050	0.145	0.215	0.741	60.295	11.043	8.934	1.150	0.016	23.858	-9.235	0.024	0.110	0.015	0.606	39.966	15.876
Std. dev of means	0.051	0.044	0.148	0.068	1.568	1.008	0.869	0.387	0.007	0.953	1.105	0.037	0.142	0.014	0.174	14.449	1.197
Mean of medians	0.028	0.141	0.215	0.763	60.528	10.893	8.980	1.044	0.013	23.909	-9.292	0.020	0.068	0.009	0.435	38.012	15.910
Std. dev of medians	0.038	0.047	0.148	0.077	1.817	1.039	0.906	0.432	0.009	0.996	1.111	0.043	0.133	0.013	0.117	14.490	1.237
(1)	1.000	0.278	0.378	0.167	-0.165	0.102	0.351	0.131	-0.037	0.290	-0.256	-0.017	0.099	-0.093	-0.201	**-0.668**	**-0.428**
(2)	**0.510**	1.000	0.170	**0.880**	**0.656**	**0.503**	**0.588**	-0.311	**0.497**	0.378	**-0.590**	0.017	0.050	**-0.638**	0.021	-0.110	-0.186
(3)	0.326	0.091	1.000	0.279	0.194	0.113	0.391	-0.088	0.045	0.345	-0.356	-0.155	0.153	-0.308	0.045	**-0.497**	-0.327
(4)	0.366	**0.761**	0.204	1.000	**0.773**	0.296	**0.516**	-0.190	0.364	0.322	**-0.602**	**0.102**	0.143	**-0.647**	0.245	-0.102	-0.093
(5)	-0.054	**0.449**	0.199	**0.680**	1.000	**0.402**	**0.548**	-0.398	**0.526**	0.380	**-0.645**	0.029	0.012	**-0.567**	0.385	0.059	0.083
(6)	-0.216	0.054	0.149	0.144	**0.757**	1.000	**0.718**	**-0.431**	**0.531**	**0.719**	**-0.654**	**-0.428**	-0.259	**-0.408**	-0.290	0.143	-0.103
(7)	-0.067	-0.107	0.270	0.182	**0.711**	**0.888**	1.000	-0.258	0.316	**0.899**	**-0.901**	-0.292	-0.060	-0.357	-0.071	-0.234	-0.299
(8)	0.196	-0.290	-0.032	-0.031	**-0.591**	**-0.698**	**-0.465**	1.000	**-0.752**	-0.221	0.188	0.305	0.309	**0.642**	0.277	-0.341	-0.103
(9)	-0.195	-0.070	0.005	-0.319	0.079	0.233	0.188	**-0.622**	1.000	0.252	-0.338	-0.286	-0.323	**-0.681**	-0.091	0.130	-0.014
(10)	-0.138	0.011	0.254	0.286	**0.763**	**0.913**	**0.913**	**-0.446**	-0.085	1.000	**-0.862**	-0.272	-0.012	-0.328	-0.162	-0.203	-0.220
(11)	0.142	-0.077	-0.239	**-0.440**	**-0.827**	**-0.853**	**-0.887**	0.352	0.150	**-0.968**	1.000	0.182	0.031	**0.461**	-0.103	0.215	0.239
(12)	0.098	0.335	0.017	**0.410**	0.191	-0.136	-0.167	0.036	**-0.414**	0.000	-0.088	1.000	**0.555**	0.144	0.100	-0.035	**0.396**
(13)	0.173	**0.413**	0.115	0.385	**0.422**	0.226	0.153	-0.337	-0.226	0.307	-0.315	**0.747**	1.000	0.166	0.143	-0.129	0.333
(14)	-0.018	**-0.527**	-0.090	-0.325	**-0.741**	**-0.687**	**-0.489**	**0.932**	**-0.440**	**-0.500**	**0.454**	-0.165	**-0.498**	1.000	0.205	-0.017	0.091
(15)	-0.176	-0.294	-0.001	0.183	-0.156	-0.390	-0.187	**0.771**	**-0.512**	-0.148	-0.010	-0.006	-0.378	**0.732**	1.000	-0.163	0.107
(16)	**-0.787**	-0.254	**-0.493**	-0.151	0.169	0.256	0.071	-0.252	0.058	0.147	-0.186	0.068	0.016	-0.141	0.009	1.000	**0.425**
(17)	**-0.428**	-0.145	-0.156	0.002	0.183	0.148	0.065	-0.207	0.023	0.101	-0.128	**0.435**	0.342	-0.171	0.012	**0.500**	1.000

This table presents the mean, standard deviation, and Pearson correlations for the country-level means and medians of the main variables used in the study. All statistics are calculated based on 42 country-level observations. Pearson correlations between country-level means are in the bottom left, and Pearson correlations between country-level medians are in the top right of the correlation matrix. Bold correlations are significantly different from zero at the 1% level. Correlation coefficients in the table with absolute value greater than 0.393, 0.305, and 0.257 are significantly different from zero at the 1, 5, and 10 percent levels, respectively. The unit of observation is country, based on either means or medians of observations at the fund-firm pair level reported on one of the fund's filings, with *NHELD* < 101 and *GI* available. Variables are defined in the note to Table 1.A.

TABLE 2.A: FUND-TIME DESCRIPTIVE STATISTICS AND CORRELATIONS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
Mean	0.14	0.13	45.00	66.00	51.00	55.00	54.00	65.00	4.36	5.40	0.08	0.28	51.22	0.38	8.42	377.03	0.66	16.41	10.36
Standard Deviation	0.05	0.06	13.00	15.00	17.00	17.00	13.00	21.00	0.65	0.71	0.03	0.18	74.32	0.19	0.83	183.81	0.06	1.18	0.46
(1) *FEMDIR FP*	1.00	-0.05	0.14	-0.18	-0.11	-0.04	-0.10	0.17	-0.17	-0.19	0.19	-0.17	-0.15	-0.17	-0.01	-0.17	-0.18	-0.14	0.20
(2) *GI*	-0.03	1.00	0.16	0.25	0.20	-0.44	0.36	-0.16	-0.01	0.28	-0.14	0.23	0.11	0.26	-0.56	0.12	0.39	0.41	-0.06
(3) *Power Distance*	0.14	0.11	1.00	-0.54	-0.46	-0.26	-0.35	0.78	-0.62	-0.64	0.51	-0.52	-0.39	-0.71	-0.22	-0.45	-0.55	-0.08	-0.40
(4) *Individuality*	-0.15	0.09	-0.58	1.00	0.43	0.01	0.64	-0.77	0.49	0.57	-0.15	0.67	0.74	0.78	-0.22	0.44	0.59	0.58	0.32
(5) *Masculinity*	-0.06	0.27	-0.24	0.27	1.00	0.47	-0.02	-0.32	0.07	0.45	-0.65	0.44	0.35	0.37	0.17	0.50	0.33	0.43	0.20
(6) *Long-term Orientation*	-0.02	-0.40	-0.12	-0.01	0.41	1.00	-0.37	0.04	-0.05	0.10	-0.38	-0.02	-0.02	-0.05	0.55	0.02	0.07	0.11	0.23
(7) *Indulgence/Restraint*	-0.12	0.31	-0.49	0.57	-0.08	-0.39	1.00	-0.66	0.45	0.32	0.01	0.53	0.44	0.64	-0.32	0.13	0.69	0.18	0.31
(8) *Uncertainty Avoidance*	0.15	-0.12	0.73	-0.71	-0.07	0.14	-0.72	1.00	-0.69	-0.68	0.29	-0.75	-0.67	-0.88	0.15	-0.52	-0.67	-0.40	-0.35
(9) *Corruption*	-0.12	-0.27	-0.67	0.38	-0.18	-0.06	0.53	-0.59	1.00	0.71	-0.37	0.58	0.48	0.69	-0.09	0.51	0.50	0.38	0.35
(10) *Religion in politics*	-0.14	0.20	-0.56	0.40	0.34	-0.02	0.27	-0.50	0.42	1.00	-0.51	0.60	0.52	0.70	-0.03	0.66	0.49	0.51	0.25
(11) *Local female director fraction*	0.10	-0.15	0.40	-0.13	-0.61	-0.27	-0.06	0.10	-0.21	-0.34	1.00	-0.44	-0.21	-0.42	-0.12	-0.33	-0.30	-0.33	-0.13
(12) *Local directors from U.S.*	-0.13	0.26	-0.35	0.57	0.27	-0.29	0.64	-0.58	0.37	0.37	-0.23	1.00	0.86	0.75	-0.38	0.55	0.67	0.69	0.28
(13) *Directors in U.S.*	-0.13	0.30	-0.32	0.66	0.20	-0.38	0.58	-0.58	0.43	0.47	-0.13	0.88	1.00	0.74	-0.43	0.46	0.61	0.75	0.12
(14) *Common language with U.S.*	-0.13	0.35	-0.55	0.78	0.27	-0.29	0.67	-0.79	0.41	0.49	-0.22	0.63	0.72	1.00	-0.34	0.34	0.59	0.54	0.29
(15) *Log distance from U.S.*	0.08	-0.05	0.16	-0.35	0.01	0.40	-0.38	0.28	-0.39	-0.30	0.07	-0.79	-0.86	-0.35	1.00	0.18	-0.20	-0.49	0.11
(16) *Genetic distance from U.S.*	-0.04	0.43	0.11	-0.24	0.13	-0.05	0.07	-0.06	-0.18	0.06	0.08	0.12	-0.02	-0.19	0.10	1.00	0.51	0.44	0.09
(17) *Religious distance from U.S.*	-0.09	0.27	-0.16	0.08	0.24	0.16	0.21	-0.36	0.02	0.04	-0.02	0.26	0.13	0.18	0.13	0.67	1.00	0.37	0.27
(18) *Log trade with U.S.*	-0.13	0.17	-0.19	0.57	0.42	0.03	0.30	-0.39	0.29	0.42	-0.32	0.80	0.84	0.54	-0.71	-0.01	0.18	1.00	0.06
(19) *Log per capita GDP*	0.14	-0.37	-0.44	0.35	0.08	0.23	0.24	-0.33	0.45	0.16	-0.03	0.15	0.08	0.20	-0.07	-0.32	-0.04	0.10	1.00
(20) *Net FDI as % of GDP*	0.00	0.00	0.02	0.00	0.01	-0.02	-0.02	-0.01	-0.04	0.02	0.05	0.03	0.03	0.01	-0.03	0.06	0.09	0.03	-0.12
(21) *Gini coefficient*	0.03	0.73	0.35	-0.23	0.30	-0.34	-0.02	0.21	-0.44	0.03	-0.23	0.13	0.15	0.05	-0.01	0.46	0.12	0.13	-0.59
(22) *Log population*	0.05	0.04	0.23	0.09	0.25	0.05	-0.32	0.12	-0.38	-0.06	0.04	0.11	0.19	0.09	-0.07	0.02	0.06	0.32	-0.46
(23) *Log migrants in U.S.*	-0.08	0.19	-0.15	0.44	0.42	-0.03	0.07	-0.30	-0.07	0.33	-0.14	0.58	0.63	0.49	-0.44	0.03	0.20	0.69	-0.26
(24) *Log migrants from U.S.*	-0.07	0.12	-0.16	0.46	0.34	-0.10	0.16	-0.33	0.08	0.29	-0.15	0.62	0.68	0.54	-0.50	-0.05	0.11	0.72	-0.23
(25) *Independent directors FP*	0.41	0.01	0.08	-0.05	-0.02	-0.05	-0.01	0.06	-0.06	-0.08	0.17	-0.01	-0.03	-0.04	0.01	0.00	-0.03	-0.05	0.35
(26) *Director age FP*	0.27	0.03	0.06	-0.03	-0.02	-0.07	0.02	0.03	-0.05	-0.06	0.13	0.02	0.02	-0.01	-0.03	0.00	-0.03	-0.02	0.29
(27) *Book value FP*	0.46	-0.05	0.23	-0.27	-0.10	-0.02	-0.22	0.26	-0.21	-0.19	0.11	-0.24	-0.24	-0.22	0.16	-0.05	-0.15	-0.22	0.01
(28) *CAPM Beta FP*	-0.27	-0.02	0.01	-0.05	-0.02	0.03	-0.05	0.03	-0.01	-0.01	0.00	-0.03	-0.03	-0.04	0.01	-0.01	-0.02	-0.01	-0.05
(29) *Dividend yield FP*	0.34	0.03	0.09	-0.06	-0.04	-0.06	-0.02	0.07	-0.09	-0.10	0.10	-0.04	-0.04	-0.04	0.02	0.01	-0.02	-0.05	0.14
(30) *Illiquidity FP*	-0.50	0.06	-0.26	0.31	0.12	0.02	0.25	-0.30	0.23	0.23	-0.13	0.28	0.27	0.26	-0.19	0.06	0.16	0.25	-0.05
(31) *Quarterly momentum FP*	-0.05	0.02	-0.02	0.04	0.00	-0.02	0.03	-0.04	0.01	0.01	0.02	0.04	0.04	0.03	-0.03	0.01	0.02	0.03	0.02
(32) *Annual momentum FP*	-0.15	0.02	-0.04	0.04	0.02	0.01	0.02	-0.04	0.03	0.03	-0.02	0.04	0.04	0.04	-0.02	0.01	0.04	0.04	-0.02
(33) *Return variance FP*	-0.37	-0.01	-0.06	0.02	0.03	0.05	0.00	-0.03	0.05	0.06	-0.06	0.02	0.01	0.01	-0.01	0.02	0.02	0.04	-0.20
(34) *Share turnover FP*	-0.18	0.03	-0.02	0.03	0.01	-0.02	0.05	-0.04	0.02	0.02	0.07	0.07	0.05	0.03	-0.04	0.03	0.03	0.04	0.14
(35) *Stock price FP*	0.00	0.00	-0.01	0.00	0.01	-0.01	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00	-0.03	0.01	0.00	0.02	-0.01
(36) *Log fund's holdings*	-0.08	0.07	-0.38	0.49	0.18	0.07	0.39	-0.46	0.23	0.26	-0.06	0.41	0.38	0.38	-0.25	0.07	0.22	0.34	0.27
(37) *INVHELD*	0.00	-0.01	0.20	-0.23	-0.09	-0.03	-0.19	0.22	-0.16	-0.13	0.07	-0.19	-0.19	-0.17	0.13	-0.03	-0.09	-0.15	-0.12
(38) *N. Directors FP*	0.31	-0.01	0.12	-0.14	-0.05	-0.01	-0.12	0.14	-0.12	-0.10	0.01	-0.14	-0.13	-0.12	0.09	-0.02	-0.08	-0.12	-0.12
(39) *Market Value FP*	0.44	-0.07	0.24	-0.30	-0.11	0.02	-0.27	0.29	-0.22	-0.20	0.05	-0.30	-0.29	-0.26	0.20	-0.07	-0.16	-0.25	-0.13

Table 2.A, continued	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)
Mean	-1.72	33.29	17.13	11.94	10.84	0.73	60.50	9.06	1.07	0.02	-9.79	0.03	0.15	0.01	0.55	122.02	15.34	0.15	11.54	24.44
Standard Deviation	11.99	3.48	1.25	1.49	1.35	0.10	2.54	1.45	0.51	0.01	1.30	0.15	0.40	0.01	0.39	1790.34	2.46	0.24	1.77	1.20
(1) *FEMDIR FP*	-0.01	0.07	0.06	-0.10	-0.09	0.44	0.30	0.47	-0.26	0.47	-0.48	-0.06	-0.12	-0.44	-0.12	0.02	-0.10	0.08	0.26	0.35
(2) *Gender Bias*	0.07	0.53	-0.02	0.39	0.33	0.01	0.02	-0.09	-0.03	0.03	0.10	0.03	0.03	-0.01	0.02	0.00	0.11	-0.10	-0.04	-0.12
(3) *Power Distance*	0.04	0.22	0.07	-0.11	-0.13	0.07	0.06	0.26	0.02	0.10	-0.28	-0.03	-0.05	-0.12	-0.06	-0.07	-0.38	0.28	0.11	0.26
(4) *Individuality*	0.03	-0.09	0.00	0.49	0.46	-0.05	-0.03	-0.35	-0.05	-0.08	0.38	0.07	0.07	0.10	0.10	0.06	0.54	-0.38	-0.17	-0.38
(5) *Masculinity*	0.05	0.12	0.30	0.36	0.31	-0.04	-0.03	-0.22	-0.02	-0.06	0.24	0.03	0.05	0.10	0.05	0.06	0.34	-0.24	-0.08	-0.23
(6) *Long-term Orientation*	-0.10	-0.36	0.36	-0.12	-0.17	-0.06	-0.07	-0.07	0.01	-0.06	0.07	-0.01	0.02	0.07	-0.01	0.06	0.12	-0.08	0.00	-0.02
(7) *Indulgence/Restraint*	-0.05	-0.01	-0.46	0.09	0.16	0.01	0.03	-0.23	-0.05	-0.02	0.24	0.05	0.04	0.02	0.08	0.03	0.35	-0.28	-0.12	-0.28
(8) *Uncertainty Avoidance*	-0.01	0.09	0.12	-0.38	-0.38	0.06	0.04	0.33	0.03	0.09	-0.35	-0.06	-0.06	-0.12	-0.10	-0.06	-0.49	0.34	0.15	0.35
(9) *Corruption*	0.07	-0.31	-0.34	0.20	0.25	-0.08	-0.06	-0.30	-0.01	-0.12	0.32	0.03	0.04	0.12	0.08	0.02	0.34	-0.28	-0.15	-0.30
(10) *Religion in politics*	0.16	-0.05	0.03	0.41	0.38	-0.10	-0.08	-0.33	-0.02	-0.13	0.35	0.04	0.05	0.15	0.07	0.05	0.41	-0.32	-0.14	-0.32
(11) *Local female director fraction*	0.06	-0.01	-0.07	-0.17	-0.21	0.21	0.18	0.23	-0.01	0.18	-0.26	0.01	-0.03	-0.17	0.04	-0.07	-0.17	0.18	0.05	0.14
(12) *Local directors from U.S.*	0.02	0.03	0.06	0.64	0.69	-0.03	-0.01	-0.32	-0.02	-0.09	0.34	0.05	0.06	0.10	0.11	0.04	0.46	-0.31	-0.17	-0.36
(13) *Directors in U.S.*	0.07	0.06	0.28	0.76	0.83	-0.03	-0.01	-0.29	-0.02	-0.09	0.31	0.04	0.05	0.10	0.11	0.03	0.41	-0.26	-0.16	-0.33
(14) *Common language with U.S.*	0.03	-0.04	-0.06	0.47	0.53	-0.07	-0.04	-0.31	-0.03	-0.09	0.34	0.04	0.06	0.11	0.09	0.04	0.43	-0.31	-0.15	-0.33
(15) *Log distance from U.S.*	0.06	-0.49	-0.05	-0.57	-0.62	-0.03	-0.05	0.01	0.00	-0.04	-0.01	-0.01	-0.01	0.03	-0.01	0.04	-0.03	-0.03	0.02	0.04
(16) *Genetic distance from U.S.*	0.23	-0.02	0.07	0.48	0.36	-0.05	-0.04	-0.29	-0.02	-0.10	0.32	0.04	0.05	0.12	0.10	0.04	0.40	-0.29	-0.14	-0.31
(17) *Religious distance from U.S.*	0.00	0.05	0.03	0.37	0.40	-0.05	-0.03	-0.33	-0.04	-0.09	0.35	0.05	0.08	0.11	0.10	0.06	0.43	-0.33	-0.16	-0.36
(18) *Log trade with U.S.*	0.09	0.16	0.41	0.81	0.81	-0.05	-0.03	-0.25	-0.01	-0.07	0.27	0.04	0.05	0.09	0.07	0.02	0.34	-0.21	-0.12	-0.26
(19) *Log per capita GDP*	-0.15	-0.35	-0.24	-0.18	-0.15	0.46	0.39	-0.02	-0.02	0.22	-0.05	0.05	0.08	-0.31	0.30	0.07	0.32	-0.18	-0.18	-0.22
(20) *Net FDI as % of GDP*	1.00	0.24	0.04	0.12	0.07	0.01	-0.01	-0.02	0.00	-0.01	0.07	0.02	-0.10	0.17	0.08	-0.06	0.04	-0.03	0.01	-0.06
(21) *Gini coefficient*	0.05	1.00	0.41	0.38	0.41	0.11	0.03	0.14	0.05	0.00	-0.14	-0.02	0.03	0.13	0.10	-0.01	-0.17	0.20	0.03	0.10
(22) *Log population*	0.12	0.34	1.00	0.56	0.55	0.08	0.06	0.10	0.02	0.03	-0.11	-0.02	0.00	-0.03	0.04	0.00	-0.07	0.14	0.02	0.07
(23) *Log migrants in U.S.*	0.12	0.30	0.79	1.00	0.89	-0.02	0.00	-0.17	0.00	-0.05	0.18	0.03	0.04	0.07	0.06	0.01	0.27	-0.13	-0.09	-0.19
(24) *Log migrants from U.S.*	0.11	0.34	0.78	0.92	1.00	-0.01	0.01	-0.15	0.00	-0.05	0.16	0.01	0.03	0.06	0.06	-0.01	0.18	-0.08	-0.09	-0.18
(25) *Independent directors FP*	-0.01	0.00	0.04	-0.02	-0.01	1.00	0.61	0.28	-0.09	0.43	-0.33	0.02	-0.03	-0.38	0.28	0.03	0.01	0.08	-0.07	-0.01
(26) *Director age FP*	-0.02	-0.02	0.03	-0.01	0.00	0.54	1.00	0.28	-0.26	0.51	-0.26	0.00	0.01	-0.46	0.05	0.09	0.04	0.06	0.18	0.02
(27) *Book value FP*	0.00	0.08	0.09	-0.11	-0.10	0.31	0.31	1.00	-0.14	0.41	-0.83	-0.08	-0.14	-0.36	-0.27	0.03	-0.31	0.26	0.50	0.81
(28) *CAPM Beta FP*	0.00	0.03	0.02	0.00	0.00	-0.13	-0.36	-0.18	1.00	-0.41	0.05	0.07	0.10	0.47	0.47	-0.09	-0.05	0.07	-0.38	-0.13
(29) *Dividend yield FP*	0.01	0.01	0.03	-0.03	-0.03	0.32	0.41	0.29	-0.34	1.00	-0.34	0.00	-0.10	-0.56	-0.31	-0.05	-0.02	0.00	0.39	0.23
(30) *Illiquidity FP*	0.02	-0.07	-0.09	0.13	0.12	-0.33	-0.27	-0.79	0.11	-0.23	1.00	0.02	-0.05	0.43	0.13	-0.16	0.28	-0.23	-0.32	-0.83
(31) *Quarterly momentum FP*	0.01	-0.01	-0.02	0.01	0.00	0.01	0.02	-0.05	-0.01	0.02	0.00	1.00	0.36	0.03	0.00	0.23	0.10	-0.08	-0.09	-0.02
(32) *Annual momentum FP*	-0.01	0.03	-0.01	0.03	0.02	-0.14	-0.11	-0.13	0.07	-0.15	-0.05	0.37	1.00	-0.05	0.00	0.50	0.16	-0.11	-0.16	0.00
(33) *Return variance FP*	0.04	0.11	0.00	0.04	0.03	-0.27	-0.46	-0.33	0.65	-0.34	0.34	0.00	0.09	1.00	0.35	-0.14	0.05	-0.07	-0.21	-0.26
(34) *Share turnover FP*	0.01	0.05	0.01	0.05	0.04	0.15	-0.07	-0.19	0.51	-0.18	0.08	0.06	0.03	0.47	1.00	-0.07	0.12	-0.04	-0.57	-0.44
(35) *Stock price FP*	0.00	0.01	0.01	0.01	0.02	-0.05	0.05	0.03	-0.03	-0.03	0.03	0.00	0.00	-0.01	-0.03	1.00	0.21	-0.21	0.03	0.21
(36) *Log fund's holdings*	0.01	-0.15	-0.09	0.23	0.17	0.02	0.06	-0.21	-0.09	-0.04	0.19	0.08	0.13	-0.06	0.03	0.01	1.00	-0.64	-0.12	-0.30
(37) *INVHELD*	0.01	0.13	0.11	-0.05	-0.03	0.01	-0.01	0.11	0.11	0.05	-0.04	-0.05	-0.08	0.09	0.07	0.01	-0.53	1.00	0.03	0.20
(38) *N. Directors FP*	0.01	0.05	0.03	-0.07	-0.07	0.02	0.30	0.50	-0.39	0.31	-0.39	-0.04	-0.16	-0.31	-0.39	-0.02	-0.10	0.00	1.00	0.53
(39) *Market Value FP*	-0.01	0.07	0.07	-0.14	-0.13	0.09	0.14	0.78	-0.19	0.19	-0.89	0.01	0.05	-0.31	-0.33	0.01	-0.20	0.02	0.55	1.00

Means and standard deviations for sample used in fund-time revealed preference tests. N = 156,520, but many variables have missing data. Pearson (Spearman) correlations in bottom left (top right). All correlations except those highlighted in gray are significant at the 0.01 level. Variable definitions can be found in the text.

TABLE 2.B: FUND-FIRM-TIME-CHANGES DESCRIPTIVE STATISTICS AND CORRELATIONS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Mean	0.004	0.005	0.049	0.015	0.307	0.084	0.014	-0.001	0.001	-0.100	0.028	0.051	0.095	0.133	0.020	-0.036
Standard Deviation	0.056	0.040	0.452	0.074	1.325	0.300	0.466	0.011	0.011	0.550	0.198	0.291	0.410	0.541	0.335	1.140
N (millions)	2.445	2.164	2.164	2.164	2.164	2.072	2.159	2.160	2.158	2.162	3.044	3.044	3.042	3.039	2.162	2.164
(1) *FRACHELD_dif*	1.000	0.005	0.010	0.011	0.009	0.037	-0.033	-0.043	-0.030	-0.082	0.117	0.124	0.107	0.101	-0.020	0.004
(2) *FEMDIR_dif*	0.005	1.000	0.701	0.141	-0.051	0.052	0.013	-0.031	0.012	-0.067	0.003	-0.001	0.005	-0.002	0.023	-0.033
(3) *#FEMDIR_dif*	0.006	0.892	1.000	0.107	-0.085	0.066	-0.012	-0.033	0.002	-0.036	-0.005	-0.004	-0.001	0.004	0.040	0.311
(4) *INDDIR_dif*	0.006	0.141	0.131	1.000	0.118	0.120	0.016	-0.024	0.022	-0.099	0.016	0.004	-0.005	-0.026	0.055	0.091
(5) *MEANAGE_dif*	0.010	-0.051	-0.085	0.103	1.000	0.156	-0.020	-0.098	0.042	-0.103	0.028	0.036	0.025	0.017	0.023	0.004
(6) *BOOK_dif*	0.031	0.052	0.066	0.069	0.156	1.000	-0.009	-0.110	-0.085	-0.258	0.033	0.126	0.091	0.114	-0.016	0.067
(7) *BETA_dif*	-0.013	-0.006	-0.012	0.015	-0.006	0.004	1.000	0.427	-0.025	0.097	-0.040	-0.057	-0.090	-0.079	0.082	-0.037
(8) *RETVAR_dif*	-0.020	-0.031	-0.033	-0.018	-0.043	-0.094	0.350	1.000	-0.005	0.220	-0.063	-0.002	-0.176	-0.177	0.209	-0.011
(9) *DIVY_dif*	-0.005	0.012	0.002	0.036	0.042	-0.085	-0.025	-0.005	1.000	0.034	0.008	-0.137	-0.236	-0.340	0.027	-0.047
(10) *ILLIQ_dif*	-0.055	-0.067	-0.036	-0.057	-0.103	-0.258	0.089	0.238	0.034	1.000	-0.207	-0.396	-0.426	-0.354	-0.013	0.009
(11) *QMOM1_dif*	0.032	-0.004	-0.005	0.019	0.028	0.000	-0.040	-0.063	-0.015	-0.227	1.000	0.627	0.486	0.374	-0.066	-0.005
(12) *QMOM2_dif*	0.035	0.000	0.000	0.004	0.036	0.055	-0.057	-0.002	-0.137	-0.424	0.627	1.000	0.779	0.642	-0.132	0.003
(13) *QMOM3_dif*	0.034	0.002	0.003	-0.003	0.025	0.091	-0.090	-0.176	-0.236	-0.426	0.491	0.769	1.000	0.828	-0.147	0.001
(14) *YMOM_dif*	0.031	0.003	0.006	-0.026	0.008	0.194	-0.046	-0.040	-0.340	-0.342	0.376	0.643	0.822	1.000	-0.092	0.011
(15) *TURN_dif*	0.008	0.030	0.025	0.055	0.017	-0.016	0.148	0.209	0.058	-0.036	-0.188	-0.224	-0.187	-0.129	1.000	0.008
(16) *NDIR_dif*	0.004	-0.033	0.320	0.091	0.004	0.095	-0.051	-0.043	-0.026	-0.006	-0.015	-0.009	-0.013	0.003	-0.010	1.000

This table presents the mean, standard deviation, and number of observations (in millions) for the main variables used in the changes analysis as well as the Pearson and Spearman correlations between them. Pearson correlations are in the bottom left, and Spearman correlations are in the top right of the correlation matrix. All correlations except those highlighted in gray are significant at the 0.01 level. The unit of observation is the fund-firm pair reported on one of the fund's filings, and the sample is based on the intersection of filings with *NHELD* < 101 and *GI* available. *FRACHELD* is the value of fund *i*'s holdings in firm *j* reported in the filing from date-*t*, divided by the sum of all holdings reported by fund *i* at date *t*, based on data from Thomson S12. *FEMDIR* is the fraction of female members of the board of directors. *#FEMDIR* is the number of female members of the board of directors. *INDDIR* is the fraction of independent members of the board of directors. *MEANAGE* is the average age of board members. *NDIR* is the number of directors on the firm's board. [#]*FEMDIR*, *INDDIR*, *MEANAGE*, and *NDIR* are based on the most recent annual meeting preceding the fund's reporting date. *BOOK* is the log book value of common equity (Compustat item CEQQ) reported during the calendar quarter prior to the fund report date. *BETA* is the CAPM beta from a regression of the firm's returns on the CRSP value-weighted market portfolio using the 24 (at least 12) full months preceding the fund report date. *RETVAR* is the variance of monthly returns for the 24 (at least 12) months preceding the fund report date. *DIVY* is the annual dividend yield based on the most recent 12 months before the fund report date. *ILLIQ* is the Amihud (2002) measure of illiquidity, calculated as the mean daily log of the absolute ex-dividend return times 10^6 divided by dollar volume for the 3 months before the fund report. *QMOM*, *QMOM2*, *QMOM3*, and *YMOM* are momentum proxies based on cumulative monthly security returns for the three, six, nine, and 12 months preceding the fund report date, respectively. *TURN* is share turnover for a held firm in the 3 months prior to the filing. *_dif* denotes a difference in the preceding variable.

TABLE 3: FUND-TIME REVEALED PREFERENCES FOR FEMALE DIRECTORS AND GENDER INEQUALITY

	Female Director Fund Preference (FEMDIR_FP)				
Model	(1)	(2)	(3)	(4)	(5)
Parameter	Estimate	Estimate	Estimate	Estimate	Estimate
GI	-0.0362 **	-0.0577 ***	-0.0683 **	-0.0747 ***	-0.0736 ***
	(0.0176)	(0.0189)	(0.0279)	(0.0173)	(0.0248)
PowerDistance			0.0001		
			(0.0003)		
Individuality			0.0000		
			(0.0002)		
Masculinity			0.0001		
			(0.0003)		
Long-termOrientation			-0.0002		
			(0.0002)		
Indulgence			0.0002		
			(0.0003)		
UncertaintyAvoidance			0.0000		
			(0.0001)		
Corruption				0.0011 *	
				(0.0006)	
Religion in politics				-0.0014 ***	
				(0.0005)	
Local female director fraction					-0.0088
					(0.0133)
Local directors from U.S.					0.0029
					(0.0052)
Directors in U.S.					0.0000
					(0.0000)
Common language with U.S.		0.0026	0.0174	-0.0004	-0.0063
		(0.0115)	(0.0472)	(0.0095)	(0.0135)
Log distance from U.S.		0.0155 **	0.0037	0.0239 ***	0.0220 **
		(0.0071)	(0.0279)	(0.0061)	(0.0097)
Genetic distance from U.S.		0.0000	0.0000	0.0000 **	0.0000
		(0.0000)	(0.0000)	(0.0000)	(0.0000)
Religious distance from U.S.		-0.0230 *	-0.0166	-0.0467 ***	-0.0159
		(0.0112)	(0.0305)	(0.0117)	(0.0143)
Log trade with U.S.		0.0026 ***	0.0040	0.0016 *	0.0023 **
		(0.0009)	(0.0037)	(0.0009)	(0.0009)
Log per capita GDP		-0.0042 *	-0.0027	-0.0040 *	-0.0061 **
		(0.0024)	(0.0035)	(0.0023)	(0.0024)
Net FDI as % of GDP		-0.0001	0.0000	0.0000	0.0000
		(0.0001)	(0.0001)	(0.0001)	(0.0001)
Gini coefficient		0.0010 ***	0.0012 ***	0.0010 ***	0.0008 **
		(0.0003)	(0.0004)	(0.0003)	(0.0003)
Log population		0.0039 ***	0.0062	0.0052 ***	0.0047 ***
		(0.0010)	(0.0038)	(0.0012)	(0.0014)
Log migrants in U.S.		-0.0038 ***	-0.0036 ***	-0.0037 ***	-0.0043 ***
		(0.0008)	(0.0012)	(0.0008)	(0.0012)
Log migrants from U.S.		-0.0078 ***	-0.0117 ***	-0.0086 ***	-0.0078 ***
		(0.0015)	(0.0026)	(0.0014)	(0.0017)
Independent directors FP		0.0881 ***	0.0882 ***	0.0882 ***	0.0791 ***
		(0.0142)	(0.0142)	(0.0142)	(0.0151)
Director age FP		-0.0059 ***	-0.0058 ***	-0.0059 ***	-0.0055 ***
		(0.0003)	(0.0003)	(0.0003)	(0.0004)
Book value FP		-0.0036 ***	-0.0036 ***	-0.0036 ***	-0.0039 ***
		(0.0007)	(0.0007)	(0.0008)	(0.0009)
CAPM Beta FP		-0.0082 **	-0.0082 **	-0.0082 **	-0.0067 **
		(0.0033)	(0.0033)	(0.0033)	(0.0030)
Dividend yield FP		0.2541 ***	0.2542 ***	0.2537 ***	0.2100
		(0.0916)	(0.0915)	(0.0915)	(0.1285)

Illiquidity FP		0.0026	0.0027	0.0026	0.0040
		(0.0042)	(0.0042)	(0.0042)	(0.0050)
Quarterly momentum FP		-0.0071	-0.0072	-0.0071	-0.0080
		(0.0047)	(0.0046)	(0.0047)	(0.0048)
Annual momentum FP		-0.0111***	-0.0111***	-0.0111***	-0.0098***
		(0.0011)	(0.0012)	(0.0012)	(0.0011)
Return variance FP		-0.0870	-0.0875	-0.0867	-0.1144
		(0.1042)	(0.1043)	(0.1044)	(0.1193)
Share turnover FP		-0.0118***	-0.0117***	-0.0118***	-0.0109***
		(0.0027)	(0.0027)	(0.0027)	(0.0037)
Stock price FP		0.0000	0.0000	0.0000	0.0000
		(0.0000)	(0.0000)	(0.0000)	(0.0000)
Log fund's holdings		-0.0004*	-0.0004**	-0.0004*	-0.0004*
		(0.0002)	(0.0002)	(0.0002)	(0.0002)
Year FE	Yes	Yes	Yes	Yes	Yes
Legal System and Continent FE	No	Yes	Yes	Yes	Yes
Country-clustered standard errors	Yes	Yes	Yes	Yes	Yes
INVHELD, NDIR FP, and *MARKET FP* linear, squared and cubic terms included	No	Yes	Yes	Yes	Yes
N	156,520	69,161	69,153	69,161	60,581
R^2	0.1616	0.3874	0.3876	0.3875	0.3707

Standard errors clustered by fund are shown in parentheses below coefficient estimates. *, **, and *** denote statistical significance at the 10, 5, and 1 percent levels, respectively. Variables are defined as follows: The dependent variable, *Female Director Fund Preference (FP)*, is a fund's revealed preference for female directors for holdings reported at time *t*, defined as $FEMDIR\_FP_{i,t} = \frac{\sum_{j,t} FEMDIR_{j,t} * HELD_{i,j,t}}{\sum_{j,t} HELD_{i,j,t}}$ where *i* denotes fund, *j* denotes portfolio firm, *t* denotes time, $FEMDIR_{j,t}$ is the fraction of female directors on firm *j* at time *t*, and $HELD_{i,j,t}$ is the fund's dollar-denominated holdings in firm *j* on time *t*. *Gender Bias* is the UN Gender Inequality Index from 2011. *Power Distance*, *Individuality*, *Masculinity*, *Long-term Orientation*, *Indulgence*, and *Uncertainty Avoidance* are Hofstede's six National Culture dimensions. *Corruption* is the country-level corruption index from the International Country Risk Guide (ICRG). *Religion in politics* is the country-level Religion in Politics index from ICRG. *Local female director fraction* is the country-year average fraction of female directors on boards of firms located in the fund's home country, taken from Schmid and Urban (2013). *Local directors from U.S.* is the fraction of foreign directors of corporate boards in the fund's home country who are from the United States, based on Barrios et al. (2017). *Directors in U.S.* is the number of U.S. corporate directors from the fund's home country reported in Barrios et al. (2017). *Common language with U.S.* is the linguistic commonality between the fund's home country and the U.S., based on the Common Language measure reported in Melitz and Toubal (2014). *Log distance from U.S.* is the log of the geographic distance from the fund's home country to the U.S., based on most populous cities, as provided by Melitz and Toubal (2014). *Genetic distance from U.S.* is the weighted F_{ST} genetic distance between the fund's home country and the U.S. as provided by Spolaore and Wacziarg (2013). *Religious distance from U.S.* is the Fearon weighted religious distance of the fund's home country from the U.S. provided by Spolaore and Wacziarg (2016). *Log trade with U.S.* is the log of total trade between the fund's home country and the U.S. from 1998 to 2007, from Melitz and Toubal (2014). *Log per capita GDP* is the log of per capita GPD in U.S. dollars in the fund's home country for the year, taken from the World Bank (WB). *Net FDI as % of GDP* is net foreign direct investment (inflows minus outflows) divided by GDP taken from the World Bank. The *Gini* coefficient and *Log population* are taken from the World Bank. *Log migrants in U.S.* is the log of the stock of migrants from the fund's home country in the U.S. in 2010 taken from the United Nations Department of Economic and Social Affairs, Population Division. *Log migrants from U.S.* is the log of the stock of migrants in the fund's home country from the U.S. in 2010 taken from the United Nations Department of Economic and Social Affairs, Population Division. Variables followed by *FP* indicate fund preferences for *Independent directors, Director age, Book value, CAPM Beta, Dividend yield, Illiquidity, Quarterly momentum, Annual momentum, Return variance, Share turnover, Stock price, MARKET (Market value),* and *NDIR* (Number of directors) are calculated as $\frac{\sum_j X_{j,t} * HELD_{i,j,t}}{\sum_j HELD_{i,j,t}}$ where $X_{j,t}$ is the appropriate measure for the portfolio firm *j* at time *t*. *Log fund's holdings* is the log of the reported holdings by the fund in dollars, and *INVHELD* is 1/*NHELD*, where *NHELD* is the number of firms reported held by the fund. Legal system indicators are taken from JuriGlobe.

TABLE 4: INVESTOR GENDER BIAS AND CHANGES IN THE FRACTION OF FEMALE DIRECTORS

	Change in fraction of fund portfolio held in firm		
Model	(1)	(2)	(3)
Parameter	Estimate (x 10,000)	Estimate (x 10,000)	Estimate (x 10,000)
Δ*Female directors * GI*	-503.065 ***	-486.168 ***	-462.534 ***
	(165.312)	(165.308)	(166.011)
Δ*CAPM Beta * GI*			-12.634
			(17.168)
Δ*Return variance * GI*			-409.657
			(929.791)
Δ*Independent directors * GI*			-94.959
			(105.576)
Δ*Director age * GI*			2.972
			(5.946)
Δ*Female directors (FEMDIR_dif)*	52.141 **	50.895 **	47.877 *
	(25.475)	(25.467)	(25.556)
Δ*Independent directors (INDDIR_dif)*	8.345	8.791	20.84
	(6.252)	(6.252)	(15.345)
Δ*Director age (MEANAGE_dif)*	0.213	0.279	-0.095
	(0.401)	(0.402)	(0.896)
Δ*Book value (BOOK_dif)*	29.928 ***	30.249 ***	30.248 ***
	(1.969)	(1.975)	(1.975)
Δ*CAPM Beta (BETA_dif)*	-8.428 ***	-8.386 ***	-6.776 ***
	(1.195)	(1.194)	(2.626)
Δ*Return variance (RETVAR_dif)*	-384.020 ***	-386.937 ***	-335.557 **
	(65.498)	(65.489)	(143.145)
Δ*Dividend yield (DIVY_dif)*	-229.349 ***	-231.018 ***	-231.029 ***
	(36.148)	(36.149)	(36.150)
Δ*Illiquidity (ILLIQ_dif)*	-35.993 ***	-36.128 ***	-36.129 ***
	(1.277)	(1.279)	(1.279)
Returns in the past 3 months (QMOM1)	80.302 ***	80.978 ***	80.963 ***
	(3.447)	(3.451)	(3.451)
Returns in the past 6 months (QMOM2)	15.044 ***	14.926 ***	14.932 ***
	(3.055)	(3.050)	(3.049)
Returns in the past 9 months (QMOM3)	5.156	5.081	5.086
	(3.342)	(3.342)	(3.343)
Returns in the past 12 months (YMOM)	-6.579 ***	-6.349 ***	-6.353 ***
	(2.439)	(2.439)	(2.439)
Δ*Share turnover (TURN_dif)*	16.065 ***	16.011 ***	16.01 ***
	(2.145)	(2.144)	(2.144)
Δ*Number of directors (NDIR_dif)*	-1.084 **	-1.067 **	-1.067 **
	(0.436)	(0.436)	(0.436)
Gender Inequality (GI)	-14.589 ***	Absorbed	Absorbed
	(5.266)		
Industry, Year-quarter, S&P Index FE	Yes	Yes	Yes
Country FE	No	Yes	Yes
Fund-clustered standard errors	Yes	Yes	Yes
N (millions of fund-firm-time observations)	2.035	2.035	2.035
R^2 (in basis points)	48.92	51.8	51.8

Standard errors clustered by fund are shown in parentheses below coefficient estimates. *, **, and *** denote statistical significance at the 10, 5, and 1 percent levels, respectively. Coefficient estimates and standard errors are multiplied by 10,000 for presentation. Variables are defined in the notes to Table 2.B.

TABLE 5: REVEALED PREFERENCE GENDER BIAS AND CHANGES IN THE FRACTION OF FEMALE DIRECTORS

	Change in fraction of fund portfolio held in firm		
Model	(1)	(2)	(3)
Parameter	Estimate	Estimate	Estimate
Δ*Female directors * lag(FEMDIR_FP)*	0.269***	0.274***	0.282***
	(0.063)	(0.063)	(0.064)
Δ*CAPM Beta * lag(FEMDIR_FP)*			0.017***
			(0.005)
Δ*Return variance * lag(FEMDIR_FP)*			-1.088***
			(0.194)
Δ*Independent directors * lag(FEMDIR_FP)*			-0.076**
			(0.033)
Δ*Director age * lag(FEMDIR_FP)*			-0.001
			(0.002)
lag(FEMDIR_FP)	0.002	0.001	0.001
	(0.003)	(0.003)	(0.003)
Δ*Female directors (FEMDIR_dif)*	-0.042***	-0.042***	-0.043***
	(0.009)	(0.009)	(0.009)
Δ*Independent directors (FEMDIR_dif)*	-0.001	-0.001	0.010**
	(0.001)	(0.001)	(0.005)
Δ*Director age (MEANAGE_dif)*	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)
Δ*Book value (BOOK_dif)*	0.002***	0.002***	0.002***
	(0.000)	(0.000)	(0.000)
Δ*CAPM Beta (BETA_dif)*	-0.001***	-0.001***	-0.003***
	(0.000)	(0.000)	(0.001)
Δ*Return variance (RETVAR_dif)*	-0.046***	-0.046***	0.106***
	(0.006)	(0.006)	(0.027)
Δ*Dividend yield (DIVY_dif)*	-0.025***	-0.025***	-0.026***
	(0.003)	(0.003)	(0.003)
Δ*Illiquidity (ILLIQ_dif)*	-0.003***	-0.003***	-0.003***
	(0.000)	(0.000)	(0.000)
Returns in the past 3 months (QMOM)	0.008***	0.008***	0.008***
	(0.000)	(0.000)	(0.000)
Returns in the past 6 months (QMOM2)	0.002***	0.002***	0.002***
	(0.000)	(0.000)	(0.000)
Returns in the past 9 months (QMOM3)	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)
Returns in the past 12 months (YMOM)	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)
Δ*Share turnover (TURN_dif)*	0.001***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)
Δ*Number of directors (NDIR_dif)*	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)
Industry, Year-quarter, S&P Index FE	Yes	Yes	Yes
Country FE	No	Yes	Yes
Fund-clustered standard errors	Yes	Yes	Yes
N (millions of fund-firm-time observations)	1.97	1.97	1.97
R^2 (in basis points)	49.453	51.713	52.45

Standard errors clustered by fund are shown in parentheses below coefficient estimates. *, **, and *** denote statistical significance at the 10, 5, and 1 percent levels, respectively. Coefficient estimates and standard errors are multiplied by 10,000 for presentation. Variables are defined in the notes to Table 2.B.

TABLE 6: PREFERENCE FOR NUMBER OF DIRECTORS

	Number of Female Directors Fund Preference (NFEMx_FP)							
Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
NFEMx_FP, x =	0	1	2	3+	0	1	2	3+
Parameter	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate
Gender Bias	0.283***	-0.005	-0.230*	-0.048				
	(0.100)	(0.139)	(0.124)	(0.094)				
lag(FEMDIR_FP)					-1.065***	-1.438***	0.474***	2.029***
					(0.040)	(0.058)	(0.059)	(0.044)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Legal System and Continent FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fund-clustered standard errors	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MARKET_FP, INVHELD, and NDIR_FP linear, squared and cubic terms included	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls from Table 3, Model 2 Included	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	69,161	69,161	69,161	69,161	61,735	61,735	61,735	61,735
R^2	0.452	0.182	0.175	0.368	0.514	0.244	0.176	0.484

Standard errors clustered by fund are shown in parentheses below coefficient estimates. *, **, and *** denote statistical significance at the 10, 5, and 1 percent levels, respectively. Variables are defined as follows: The dependent variable, *Number of Female Directors Fund Preference (NFEMx_FP)*, is a fund's revealed preference for firms with 0, 1, 2, or 3+ female directors for holdings reported at time *t*, defined as $NFEMx\_FP_{i,t} = \frac{\sum_{j,t} 1_{NFEM_{j,t}=x} * HELD_{i,j,t}}{\sum_{j,t} HELD_{i,j,t}}$ where *i* denotes fund, *j* denotes portfolio firm, *t* denotes time, $NFEMx_{j,t}$ is the number of female directors on firm *j* at time *t*, and $HELD_{i,j,t}$ is the fund's dollar-denominated holdings in firm *j* on time *t*. *Gender Bias* is the UN Gender Inequality Index from 2011. *Female Director Fund Preference (FEMDIR_FP)*, is a fund's revealed preference for female directors for holdings reported at time *t*, defined as $FEMDIR\_FP_{i,t} = \frac{\sum_{j,t} FEMDIR_{j,t} * HELD_{i,j,t}}{\sum_{j,t} HELD_{i,j,t}}$ where *i* denotes fund, *j* denotes portfolio firm, *t* denotes time, $FEMDIR_{j,t}$ is the fraction of female directors on firm *j* at time *t*, and $HELD_{i,j,t}$ is the fund's dollar-denominated holdings in firm *j* on time *t*. All specifications include controls as in Table 3, Model 2, which are described in the note to Table 3.

TABLE 7: GENDER BIAS AND CHANGES IN THE NUMBER OF FEMALE DIRECTORS

Coeff. Est. Std. Error % of Sample	*#FEMDIR_dif<-1*	*#FEMDIR_dif=-1*	*#FEMDIR_dif=0*	*#FEMDIR_dif=1*	*#FEMDIR_dif>1*
lag(#FEMDIR)=0	N/A	N/A	Omitted Base	-0.005	-0.024
	N/A	N/A	Category	(0.005)	(0.015)
	0.0%	0.0%	9.5%	1.6%	0.3%
lag(#FEMDIR)=1	N/A	-0.014	-0.001	-0.008 **	-0.013
	N/A	(0.010)	(0.002)	(0.003)	(0.016)
	0.0%	0.7%	29.6%	3.7%	0.6%
lag(#FEMDIR)=2	0.003	0.002	0.000	-0.005	-0.006
	(0.023)	(0.005)	(0.002)	(0.005)	(0.012)
	0.0%	2.1%	31.7%	2.1%	0.2%
lag(#FEMDIR)=3	0.013	-0.001	-0.001	-0.013 **	-0.009
	(0.012)	(0.006)	(0.002)	(0.005)	(0.012)
	0.2%	1.5%	11.0%	0.8%	0.0%
lag(#FEMDIR)>3	-0.006	0.000	-0.002	0.010	-0.047
	(0.013)	(0.007)	(0.002)	(0.013)	(0.047)
	0.1%	0.7%	3.4%	0.1%	0.0%

This table presents estimates of the coefficients of interest, $\gamma_{X,Y}$, from an estimate of the following regression equation:

$$FRACHELD\_dif_{i,j,t} = \sum_{X,Y} \gamma_{X,Y} * 1_{\#FEMDIR_{j,t-1}X} * 1_{\#FEMDIR\_dif_{j,t}Y} * GenderBias_k + \sum_{Z} \delta_Z * CONTROL_Z + \varepsilon_{i,j,t}.$$

This is the regression from Table 5, Column 3, but with *FEMDIR_dif*$_{j,t}$ replaced with the product of indicators for *lag(#FEMDIR)X* and *#FEMDIR_difY*, where $X \in (=0, =1, =2, =3, >3)$ and $Y \in (<-1, =-1, =0, =1, >1)$. Coefficients marked with N/A are omitted because they are infeasible. The coefficient for $(X = 0, Y = 0)$ is treated as the omitted base case. *#FEMDIR(_dif)* is the (change in) the number of female directors. Each cell shows the coefficient estimate on $1_{Column\ Header} * 1_{Row\ Header} * GenderBias_k$, its standard error in parentheses, and the percent of the sample satisfying $1_{Column\ Header} * 1_{Row\ Header}$. Controls include each indicator and product of indicators. Additional controls from Table 5, Column 3 are also included, and are defined in the notes to Table 2.B. Standard errors clustered by fund are shown in parentheses below coefficient estimates. *, **, and *** denote statistical significance at the 10, 5, and 1 percent levels, respectively.

TABLE 8: EFFECT HETEROGENEITY

8.A: Gender differences in preferences

Model	(1)	(2)	(3)	(4)
Gender Bias Measure	*-GI*	lag(*FEMDIR_FP*)	*-GI*	lag(*FEMDIR_FP*)
Parameter	Estimate	Estimate	Estimate	Estimate
Δ*Female directors * Gender Bias*	0.032 *	0.293 ***	0.146 ***	0.295 ***
	(0.016)	(0.067)	(0.053)	(0.065)
Δ*Female directors * Gender Bias * PrefDif*	-0.033 **	-0.256 ***		
	(0.015)	(0.062)		
Δ*Female directors * Gender Bias * PrefDif_Altruism*			-0.014	-0.115
			(0.034)	(0.133)
Δ*Female directors * Gender Bias * PrefDif_Trust*			0.035	-0.128
			(0.092)	(0.161)
Δ*Female directors * Gender Bias * PrefDif_PosRecip*			-0.035	0.146 *
			(0.050)	(0.078)
Δ*Female directors * Gender Bias * PrefDif_NegRecip*			0.061	0.203 *
			(0.069)	(0.111)
Δ*Female directors * Gender Bias * PrefDif_RiskTaking*			0.109	-0.045
			(0.107)	(0.106)
Δ*Female directors * Gender Bias * PrefDif_Patience*			-0.080	0.056
			(0.061)	(0.065)
All 2-way interaction terms	Included	Included	Included	Included
Controls and FE from Tables 4 & 5, Col. 2	Included	Included	Included	Included
Standard Errors Clustered by	Fund	Fund	Fund	Fund
N (millions of fund-firm-time observations)	1.811	1.752	1.811	1.752
R^2 (in basis points)	50.33	50.55	50.43	51.10

8.B: Local prevalence of women in various professions

Model	(1)	(2)	(3)	(4)	(5)	(6)
Gender Bias Measure	-*GI*	lag(*FEMDIR_FP*)	-*GI*	lag(*FEMDIR_FP*)	-*GI*	lag(*FEMDIR_FP*)
Parameter	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate
Δ*Female directors * Gender Bias*	0.047 *	0.272 ***	0.038 **	0.296 ***	0.054 ***	0.286 ***
	(0.025)	(0.062)	(0.017)	(0.075)	(0.018)	(0.068)
Δ*Female directors * Gender Bias * %Fem Fund Mgrs.*	-0.002	0.217 ***				
	(0.048)	(0.080)				
Δ*Female directors * Gender Bias * %Fem. Doctors*			-0.071 ***	0.193 **		
			(0.023)	(0.078)		
Δ*Female directors * Gender Bias * FracFemDirCY*					-0.008	-0.103 *
					(0.022)	(0.059)
All 2-way interaction terms	Included	Included	Included	Included	Included	Included
Controls and FE from Tables 4 & 5, Col. 2	Included	Included	Included	Included	Included	Included
Standard Errors Clustered by	Fund	Fund	Fund	Fund	Fund	Fund
N (millions of fund-firm-time observations)	1.939	1.876	1.622	1.569	1.865	1.806
R^2 (in basis points)	50.93	50.48	53.17	52.31	58.08	58.11

8.C: Hostile and Benevolent Sexism

Model	(1)	(2)	(3)	(4)
Gender Bias Measure	*-GI*	lag(*FEMDIR_FP*)	*-GI*	lag(*FEMDIR_FP*)
Parameter	Estimate	Estimate	Estimate	Estimate
Δ*Female directors * Gender Bias*	0.046 **	0.333 ***	0.048 *	0.317 ***
	0.020	0.093	0.025	0.090
Δ*Female directors * Gender Bias * Hostile Sexism*	0.005	0.233 ***		
	0.010	0.070		
Δ*Female directors * Gender Bias * Benevolent Sexism*			0.002	0.311 ***
			0.016	0.079
All 2-way interaction terms	Included	Included	Included	Included
Controls and FE from Table 4 & 5, Col. 2	Included	Included	Included	Included
Standard Errors Clustered by	Fund	Fund	Fund	Fund
N (millions of fund-firm-time observations)	1.216	1.180	1.216	1.180
R^2 (in basis points)	53.757	52.079	53.748	52.296

8.D: Geographic and linguistic distance

Model	(1)	(2)	(3)	(4)
Gender Bias Measure	*-GI*	lag(*FEMDIR_FP*)	*-GI*	lag(*FEMDIR_FP*)
Parameter	Estimate	Estimate	Estimate	Estimate
Δ*Female directors * Gender Bias*	0.039	0.283***	0.063***	0.273***
	(0.032)	(0.065)	(0.021)	(0.062)
Δ*Female directors * Gender Bias * Log Dist. from U.S.*.	0.021	0.078**		
	(0.055)	(0.031)		
Δ*Female directors * Gender Bias * Com. Lang. with U.S.*			-0.044**	-0.234***
			(0.020)	(0.055)
All 2-way interaction terms	Included	Included	Included	Included
Controls and FE from Table 4 & 5, Col. 2	Included	Included	Included	Included
Standard Errors Clustered by	Fund	Fund	Fund	Fund
N (millions of fund-firm-time observations)	2.035	1.967	2.035	1.967
R^2 (in basis points)	51.77	51.76	51.82	52.09

This table presents estimates of Model 2 from Tables 4 (odd-numbered columns) and 5 (even-numbered columns), with Δ*Female directors * Gender Bias* interacted with proxies for differences preferences between men and women (8.A), hostile and benevolent sexism attitudes (8.B), monitoring costs and fund market size (8.C), and the fraction of women in various professions (8.D). Each interactive variable is standardized to be mean-zero and unit-variance. *Gender Bias* is either the home-country Gender Inequality Index (GI) or $FEMDIR\_FP_{i,t-1}$, which captures the fund's revealed preference for female directors on its last filing. *PrefDif_X* is a country-level measure from Falk and Hermle (2018) of the degree to which women in the fund's home country exhibit greater X than men, where X is one of six preference measures: altruism, trust, positive reciprocity, negative reciprocity, risk taking, and patience. *PrefDif* is the first principal component from the six *PrefDif_X* measures. *%Fem Fund Mgrs.* and *%Fem. Doctors* are the percentage of fund managers and doctors, respectively, in the fund's home country who are female, as reported by Sargis and Lutton (2016), Exhibit 1. *FracFemDirCY* is the country-year average fraction of female directors on boards of firms located in the fund's home country, taken from Schmid and Urban (2013). *Common language with U.S.* is the linguistic commonality between the fund's home country and the U.S., based on the Common Language measure reported in Melitz and Toubal (2014). *Log distance from U.S.* is the log of the geographic distance from the fund's home country to the U.S., based on most populous cities, as provided by Melitz and Toubal (2014). Standard errors clustered by fund are shown in parentheses below coefficient estimates. *, **, and *** denote statistical significance at the 10, 5, and 1 percent levels, respectively. All specifications include the interactive variable (when not collinear with country fixed effects) and 2-way interactions, as well as the controls and fixed effects from Column 2 in Tables 4 and 5.